TC-K333ESG/K950ES

SERVICE MANUAL

US Model
Canadian Model
AEP Model
UK Model
TC-K950ES
E Model
TC-K333ESG

TC-K333ESG

Dolby noise reduction manufactured under license from Dolby Laboratories Licensing Corporation.
"DOLBY" and the double-D symbol ◻◻ are trademarks of Dolby Laboratories Licensing Corporation.

Model Name Using Similar Mechanism	New
Tape Transport Mechanism Type	TCM-200D1

SPECIFICATIONS

Recording system 4-track 2-channel stereo
Bias AC bias
Heads Erase head × 1 (S&F head)
Recording head × 1 (LA head)
Playback head × 1 (LA head)
Motors Capstan motor × 1
(direct drive linear torque BSL motor)
Reel motor × 1 (DC motor)
Wow and flutter 0.024% WRMS (NAB)
Fast-forward and rewind time
Approx. 90 sec. (with C-60 cassette)

Frequency response (DOLBY NR OFF)

TYPE IV cassette (Sony METAL-ES)	15 – 22,000 Hz (±3 dB, DIN) 15 – 16,000 Hz (OVU recording)
TYPE II cassette (Sony UX-S)	15 – 20,000 Hz (±3 dB, DIN)
TYPE I cassette (Sony HF-S)	15 – 18,000 Hz (±3 dB, DIN)

Signal-to-noise ratio (at peak level)

Dolby NR switch / Cassette	OFF	B-TYPE ON	C-TYPE ON
TYPE IV (Sony METAL-ES)	61 dB	70 dB	76 dB
TYPE II (Sony UX-S)	59 dB	68 dB	74 dB
TYPE I (Sony HF-S)	57 dB	66 dB	72 dB

Total harmonic distortion
0.8% (with Sony METAL-ES cassette)

Inputs

Line inputs (phono jacks)	Sensitivity	77.5 mV (– 20 dB)
	Input impedance	50k ohms
CD DIRECT INPUT	Input impedance	50k ohms

Outputs

Line outputs (phono jacks)	Rated output level	0.44 V (– 5 dB) at a load impedance 47k ohms
	Load impedance	Over 10k ohms
Headphones (stereo phone jack)	Output level	0 – 3 mW at a load impedance of 32 ohms

General

Power requirements
AEP model :
220 V AC, 50/60 Hz
UK model :
240 V AC, 50 Hz
US, Canadian models :
120 V AC, 60 Hz
E model :
120, 220, or 240 V AC adjustable, 50/60 Hz
Power consumption 31 W
Dimensions Except UK model :
Approx. 470 × 140 × 380 mm (w/h/d)
(18 5/8 × 5 5/8 × 15 inches)
UK model :
Approx. 430 × 140 × 380
(17 × 5 5/8 × 15 inches)
including projecting parts and controls
Weight Approx. 11.7 kg (25 lbs 13 oz)
Model for the United Kingdom:
Approx. 11 kg (24 lbs 5 oz)

Supplied accessories Audio connecting cord (2)
Wireless remote control unit RM-J702 (1)
Sony R6 (size-AA) batteries (2)
Screws (8) (Except UK model)

A remote commander and Sony R6 batteries are supplied with UK, E models.

Design and specifications subject to change without notice.

Note
This appliance conforms with EEC Directive 87/308/EEC regarding interference suppression.

STEREO CASSETTE DECK

SONY®

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Flexible Circuit Board Repairing

- Keep the temperature of the soldering iron around 270℃ during repairing.
- Do not touch the soldering iron on the same conductor of the circuit board (within 3 times).
- Be careful not to apply force on the conductor when soldering or unsoldering.

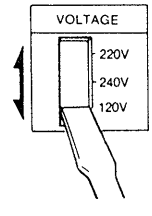
Notes on chip component replacement

- Never reuse a disconnected chip component.
- Notice that the minus side of a tantalum capacitor may be damaged by heat.

Dolby noise reduction and HX Pro headroom extension manufactured under license from Dolby Laboratories Licensing Corporation. HX Pro originated by Bang & Olufsen.

Operating voltage

Before connecting the unit to the power source, check that the operational voltage of your unit is the same as the local power supply.

Where purchased	Operating voltage
AEP, WG model	220 V AC, 50/60 Hz
UK model	240 V AC, 50 Hz
US, Canadian model	120 V AC, 60 Hz
E model	120, 220 or 240 V AC adjustable, 50/60 Hz A voltage selector is located on the rear panel. If the selector must be reset, **disconnect the AC power cord** and set the selector to the appropriate voltage.  VOLTAGE selector

SAFETY-RELATED COMPONENT WARNING!!

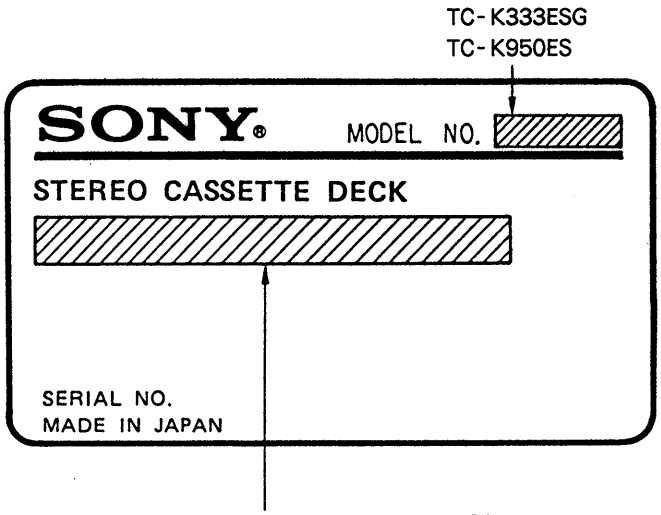
COMPONENTS IDENTIFIED BY MARK ⚠ OR DOTTED LINE WITH MARK ⚠ ON THE SCHEMATIC DIAGRAMS AND IN THE PARTS LIST ARE CRITICAL TO SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY.

ATTENTION AU COMPOSANT AYANT RAPPORT À LA SÉCURITÉ!

LES COMPOSANTS IDENTIFIÉS PAR UNE MARQUE ⚠ SUR LES DIAGRAMMES SCHÉMATIQUES ET LA LISTE DES PIÈCES SONT CRITIQUES POUR LA SÉCURITÉ DE FONCTIONNEMENT. NE REMPLACER CES COMPOSANTS QUE PAR DES PIÈCES SONY DONT LES NUMÉROS SONT DONNÉS DANS CE MANUEL OU DANS LES SUPPLÉMENTS PUBLIÉS PAR SONY.

MODEL IDENTIFICATION

– Specification Label –



US, Canadian Models: AC : 120V 60Hz 31W
AEP, West Germany
Model: AC : 220V ∿50/60Hz 31W
UK Model: AC : 240V ∿50/60Hz 31W
E Model: AC : 120, 220, 240V
∿50/60Hz 31W

SAFETY CHECK-OUT

After correcting the original service problem, perform the following safety check before releasing the set to the customer:
Check the antenna terminals, metal trim, "metallized" knobs, screws, and all other exposed metal parts for AC leakage. Check leakage as described below.

LEAKAGE TEST

The AC leakage from any exposed metal part to earth ground and from all exposed metal parts to any exposed metal part having a return to chassis, must not exceed 0.5 mA (500 microampers). Leakage current can be measured by any one of three methods.

1. A commercial leakage tester, such as the Simpson 229 or RCA WT-540A. Follow the manufacturers' instructions to use these instruments.
2. A battery-operated AC milliammeter. The Data Precision 245 digital multimeter is suitable for this job.
3. Measuring the voltage drop across a resistor by means of a VOM or battery-operated AC voltmeter. The "limit" indication is 0.75 V, so analog meters must have an accurate low-voltage scale. The Simpson 250 and Sanwa SH-63Trd are examples of a passive VOM that is suitable. Nearly all battery operated digital multimeters that have a 2 V AC range are suitable. (See Fig. A)

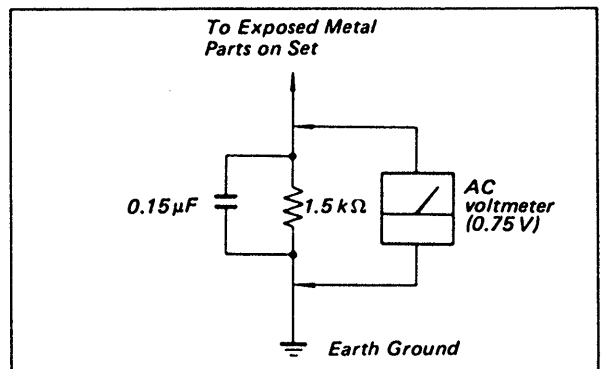
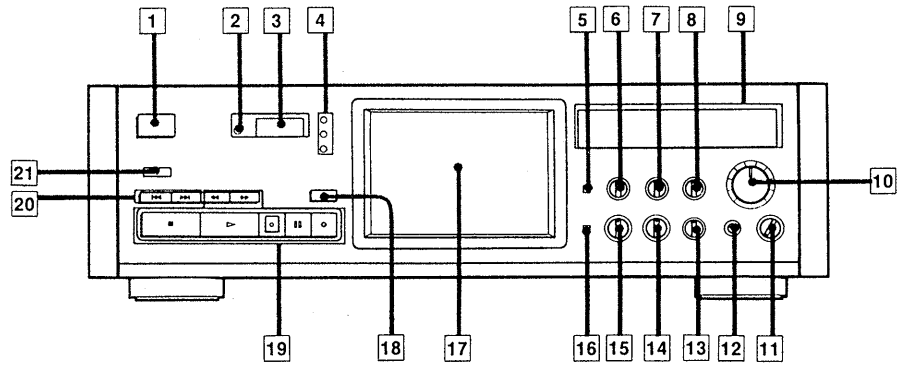


Fig. A. Using an AC voltmeter to check AC leakage.

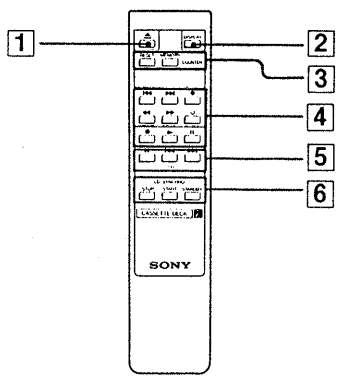
SECTION 1
GENERAL

LOCATION AND FUNCTION OF CONTROLS



1 **POWER switch**
2 **Remote sensor**
You can remotely control this cassette deck with:
— A remote commander that has an RM mark and comes with a Sony amplifier or receiver and which can be used to control a cassette deck.
— An optional Sony remote commander that has an RM mark.
3 **LINEAR COUNTER**
4 **RESET button**
MEMORY button
DISPLAY MODE button
5 **Dolby HX PRO button**
6 **DOLBY NR (noise reduction)/ MPX FILTER switch**
7 **MONITOR switch**
8 **INPUT switch**
9 **PEAK PROGRAM METER**
10 **REC (recording) LEVEL**
11 **PHONE (headphones)LEVEL control**
12 **HEADPHONES jack (stereo headphone jack)**
13 **REC EQ CAL (recording equalization calibration) switch (LOW, NORMAL, HIGH)**
14 **REC (recording) LEVEL cohtrol for calibration**
15 **BIAS (bias adjust) control**
16 **CALIBRATION button**
17 **Cassette holder**
18 **≜ OPEN/CLOSE button**
19 **Tape operation buttons and indicators**
◀◀ (rewind) button
■ (stop) button
▶ (play) button and indicator
▶▶ (fast-forward) button
● REC (record) button and indicator
II PAUSE button and indicator
O REC MUTE (record muting) button
20 **AMS(Automatic Music Sensor) buttons**
21 **TIMER switch**

Remote Commander



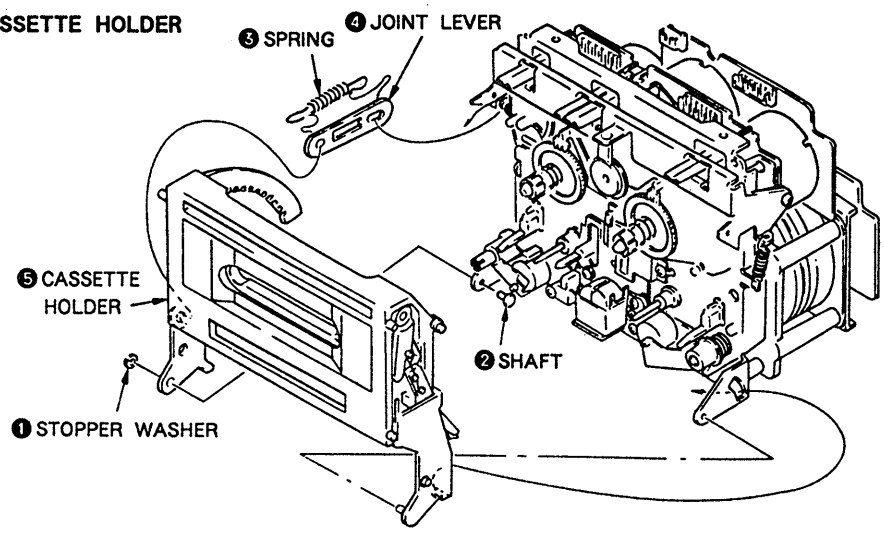
1 **≜ (open/close) button**
for opening and closing the cassette holder
2 **DISPLAY button**
for selecting the display mode
3 **Counter buttons**
RESET button
for resetting the counter to zero
MEMORY button
for activating and deactivating the Memory function
4 **Tape operation buttons**
|◀◀/▶▶| (AMS*) buttons
for locating selections sequentially
◀◀ (leftward fast winding) button
▶▶ (rightward fast winding) button
▶ (forward play) button
● (record) button
■ (stop) button
II (pause) button
O (record muting) button
5 **CD (Compact Disc) buttons (for Sony CD players)**
II (pause) button
|◀◀/▶▶| (AMS) buttons
for locating selections sequentially
6 **CD SYNCHRO buttons**
for synchronized recording with a Sony CD player (see procedure below)
STOP (synchronized recording stop) button
START (synchronized recording start) button
STANDBY (synchronized recording standby) button

* AMS is an abbreviation for Automatic Music Sensor.
Procedure for Synchronized Recording with a CD Player

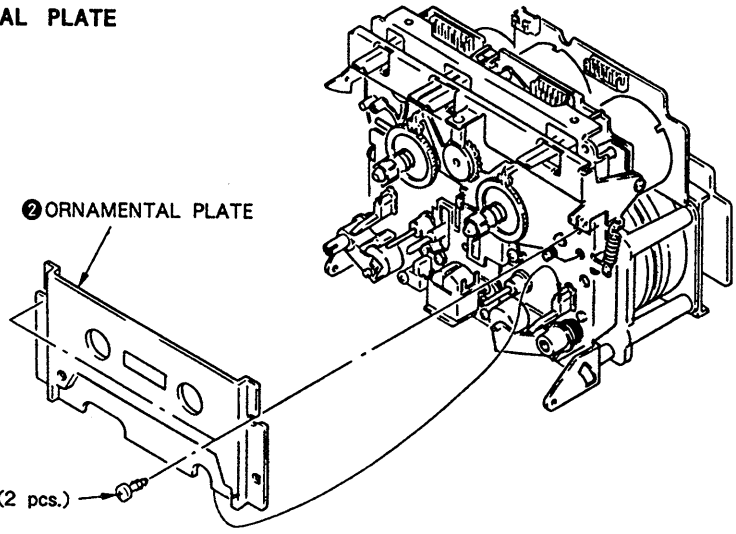
SECTION 2
DISASSEMBLY

NOTE : Follow the disassembly procedure in the numerical order given.

CASSETTE HOLDER

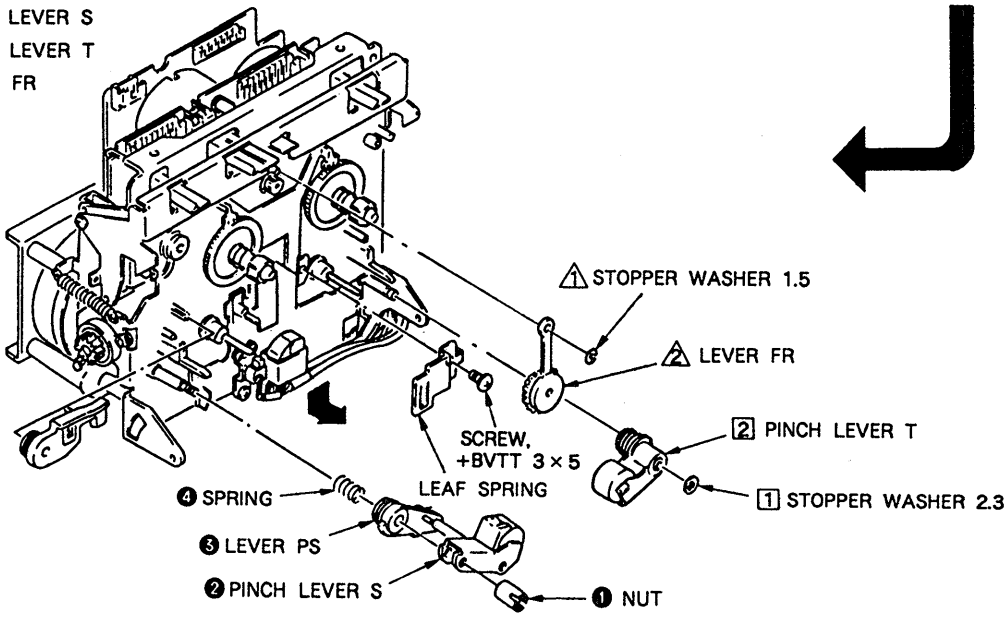


ORNAMENTAL PLATE



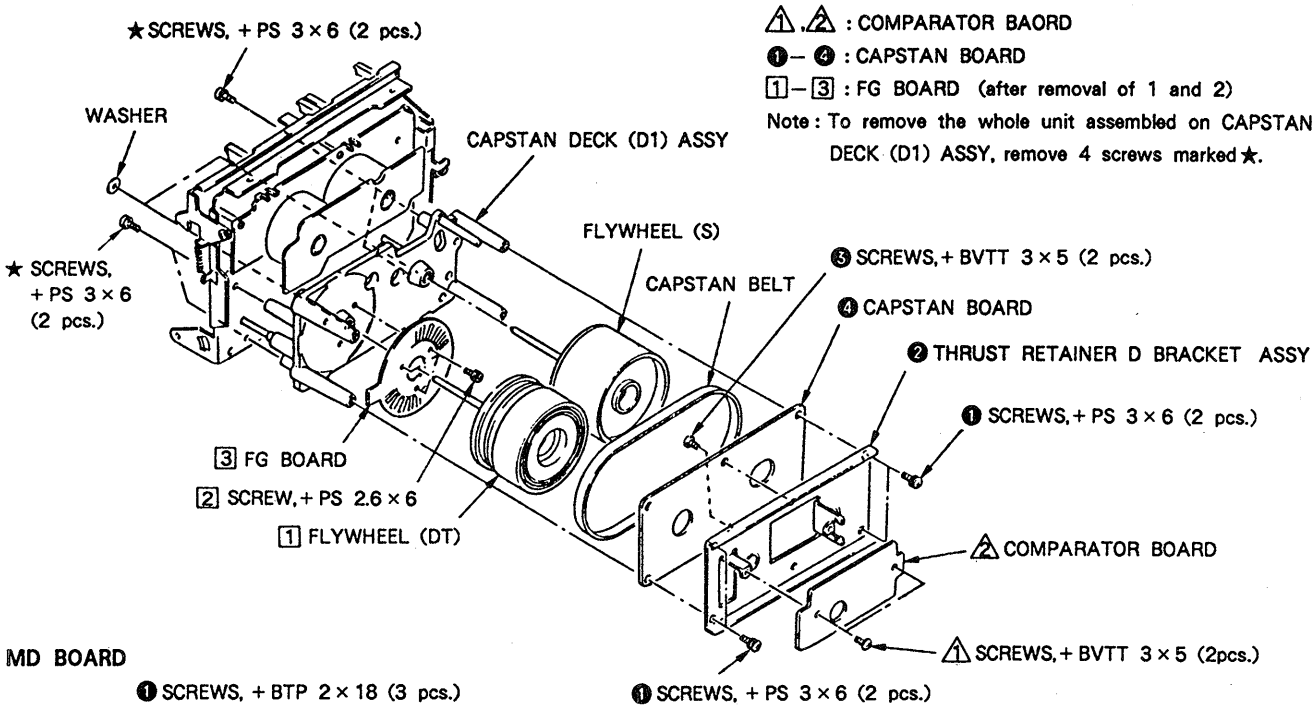
PINCH LEVER/LEVER FR/HEAD

❶ – ❹ : PINCH LEVER S
[1], [2] : PINCH LEVER T
⚠1, ⚠2 : LEVER FR

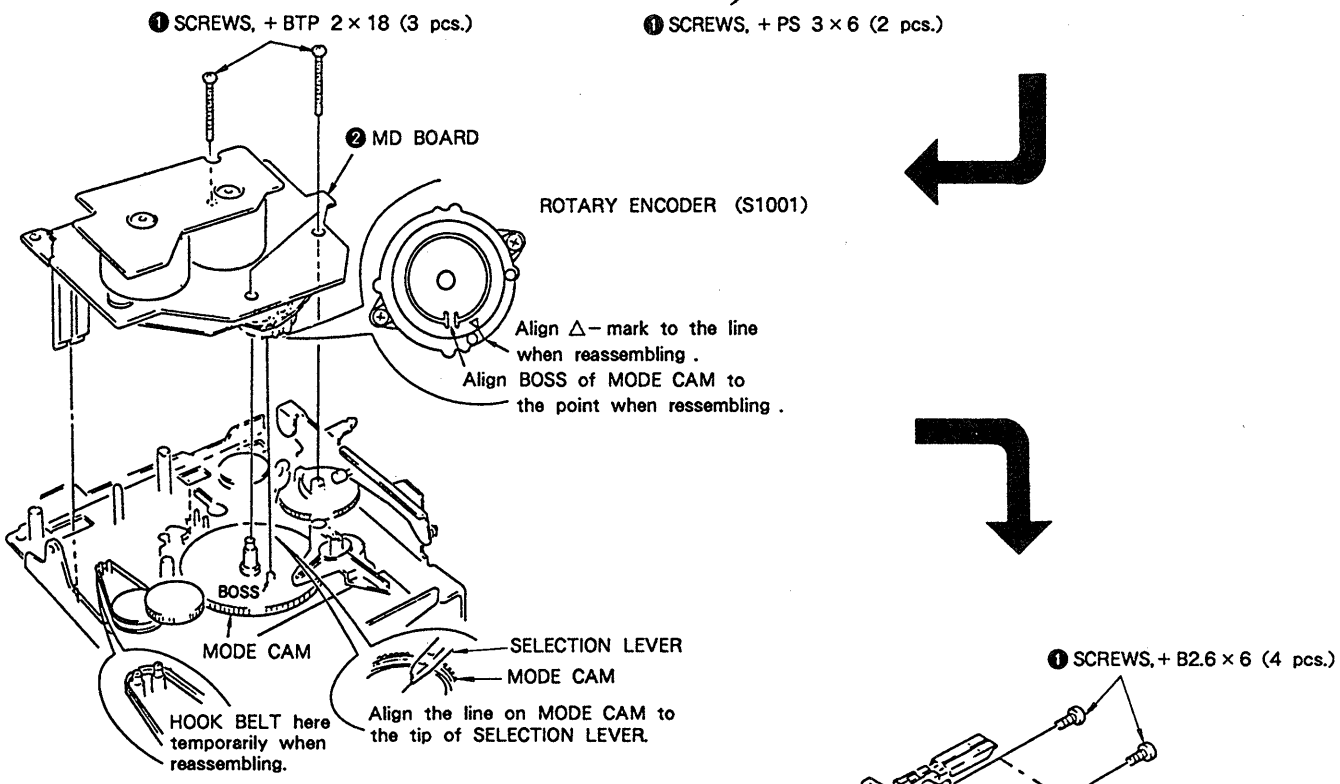


COMPARATOR BOARD/CAPSTAN BOARD/FLYWHEELS/FG BOARD

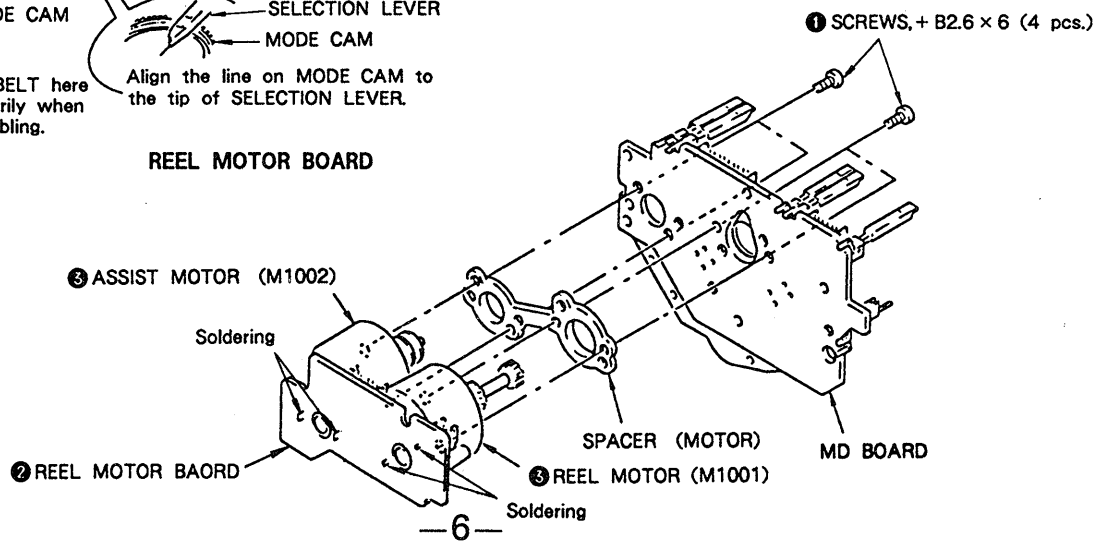
⚠1,⚠2 : COMPARATOR BAORD
❶– ❹ : CAPSTAN BOARD
[1]–[3] : FG BOARD (after removal of 1 and 2)
Note : To remove the whole unit assembled on CAPSTAN DECK (D1) ASSY, remove 4 screws marked ★.


★SCREWS, + PS 3 × 6 (2 pcs.)
WASHER
CAPSTAN DECK (D1) ASSY
FLYWHEEL (S)
★ SCREWS, + PS 3 × 6 (2 pcs.)
❸ SCREWS, + BVTT 3 × 5 (2 pcs.)
CAPSTAN BELT
❹ CAPSTAN BOARD
❷ THRUST RETAINER D BRACKET ASSY
❶ SCREWS, + PS 3 × 6 (2 pcs.)
[3] FG BOARD
[2] SCREW, + PS 2.6 × 6
[1] FLYWHEEL (DT)
⚠2 COMPARATOR BOARD
⚠1 SCREWS, + BVTT 3 × 5 (2pcs.)
❶ SCREWS, + PS 3 × 6 (2 pcs.)

MD BOARD


❶ SCREWS, + BTP 2 × 18 (3 pcs.)
❷ MD BOARD
ROTARY ENCODER (S1001)
Align △– mark to the line when reassembling .
Align BOSS of MODE CAM to the point when ressembling .
BOSS
MODE CAM
SELECTION LEVER
MODE CAM
HOOK BELT here temporarily when reassembling.
Align the line on MODE CAM to the tip of SELECTION LEVER.

REEL MOTOR BOARD



SECTION 3
ADJUSTMENTS

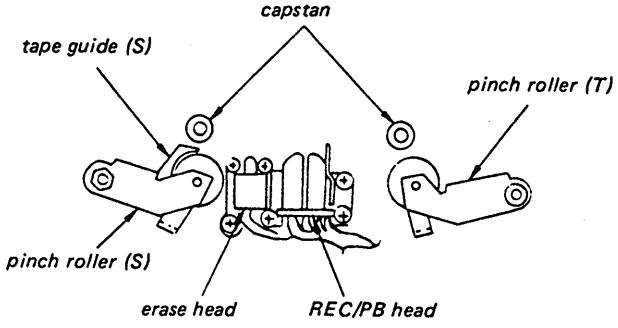
3-1. MECHANICAL ADJUSTMENTS

PRECAUTION

1. Clean the following parts with a denatured-alcohol-moistened swab:

record/playback head	pinch roller
erase head	rubber belts
capstan	idlers

2. Demagnetize the record/playback and erase head with a head demagnetizer.
3. Do not use a magnetized screwdriver for the adjustments.
4. After the adjustments, apply suitable locking compound to the parts adjusted.
5. The adjustments should be performed with the rated power supply voltage unless otherwise noted.



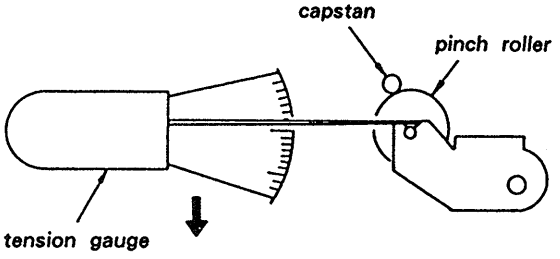
Pinch Roller Pressing Force Measurement

Mode : playback

Hook needle of the tension gauge to the pinch roller shaft and push back pinch roller to detach it from capstan. Then, return it gradually to capstan and read the gauge when the pinch roller begins turnning.

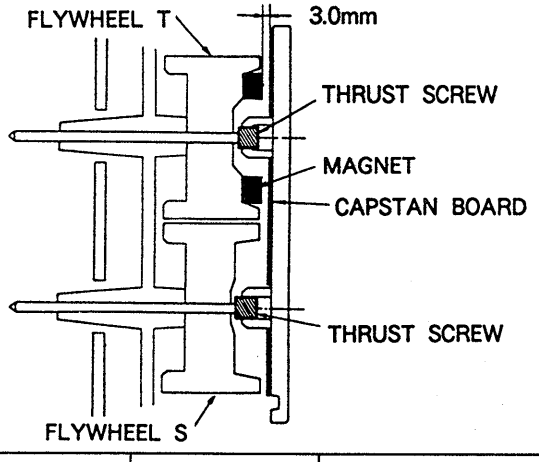
Standard Limits :

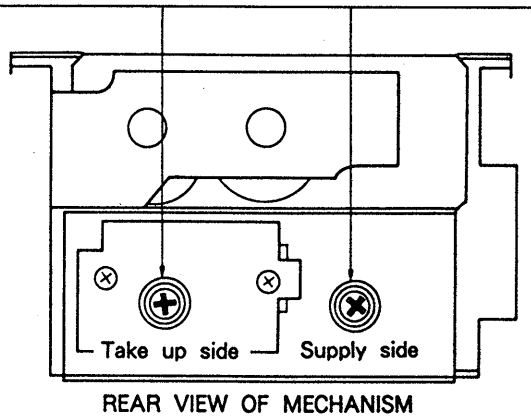
Tape-up side : 270 – 350g (9.5 – 12oz)
Supply side : 180 – 280g (6.4 – 9.9oz)



FLYWHEELS T/S THRUST ADJUSTMENT

1. FLYWHEEL T THRUST ADJUSTMENT :
   Insert 3mm – thick spacer guage into the clearance between magnet of FLYWHEEL T and CAPSTAN Board, and adjust THRUST SCREW so that thrust play is 0.2 – 0.4mm .
2. FLYWHEELS THRUST ADJUSTMENT :
   Tighten THRUST SCREW lightly until the flywheel has no play and then loosen the screw by 1/2 – 3/4 turns.
3. After adjustments, apply locking compounce to the screws.





REAR VIEW OF MECHANISM

Tape Path Adjustment

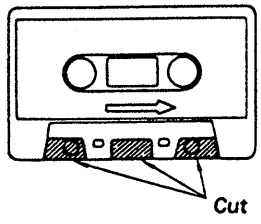
• Refer to Adjustment Position on page 10.

Note : When using the adjustment methods for other than replacement reasons, please do not tamper unnecessarily with the adjustment screws or the erasehead because either the supply pinch roller guide or the record/playback head will be made the standard tape paths. Moreover, when it is necessary to adjust and replace two or more of any of the heads and/or pinch rollers, replace them one by one, completely taking out the first tape path, and then replacing the second one.

Preparation :

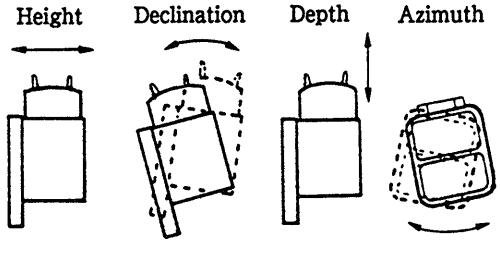
1. Mirror cassette CQ009C 8-909-708-01
   (or CQ012C 8-909-708-02)

   If one does not have this, cut out the sections of a 120-minute cassette shell as indicated below and use that cassette.



2. Phillips screwdriver (medium-size) :
   For the head adjustment screws
   Blade-type screwdriver (large-size) :
   For the supply pinch roller adjustment screws
3. Pen light
4. WS-48B (3 kHz, 0 dB)
5. P-4-A100 (10 kHz, -10 dB)

Definition of Terms : The figures are of a record/playback head.



Adjustment Method :

Supply Pinch Roller

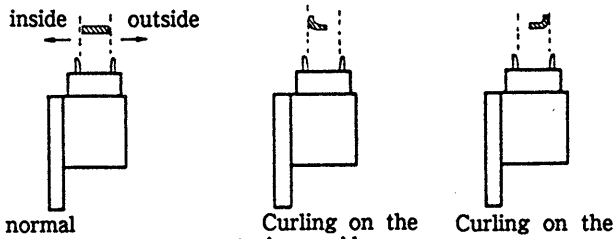
Note : Only perform this adjustment when the supply pinch roller is to be replaced.

1. Insert the mirror cassette and put the unit in record/playback mode.
2. Check to see whether the tape is curling at the record/playback head guide or the pinch roller guide.
   If it is curling, remove the curl by adjusting the ⓗ tape curl adjustment screw. Then, check that the tape is running past the middle of the erasehead.

Record/playback Head

Note : Only perfom this adjustment when the record/playback head is to be replaced.

1. Insert the mirror cassette and put the unit in record/playback mode.
2. **(Height Adjustment)** Check to see if the tape is curling at the tape guide of the head. If it is curling, tighten screws Ⓐ, Ⓑ, and Ⓒ, respectively by the same angle, moving the head so that it remains at the same angle throughout the procedure. If it curls on the bottom side of the mirror cassette (actually the inner side), tighten all the screws equally ; but loosen them if the tape begins to curl on the top side (outer side).



normal (record/playback head as seen from the side of the erasehead.)

Curling on the inner side. Tighten screws Ⓐ, Ⓑ, and Ⓒ.

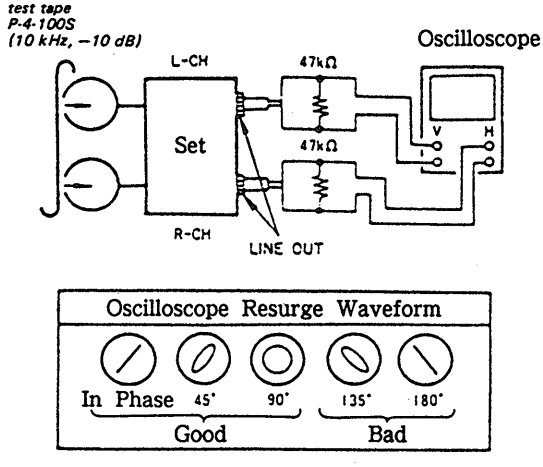
Curling on the outer side. Loosen screws Ⓐ, Ⓑ, and Ⓒ.

3. **(Declination Adjustment)** While in the record/playback position, set the back tension to 0 (wind the supply reel with something thin like a pencil in a counterclockwise direction) and make sure there is no curling or shifting (shifting up/shifting down) at the guide of the record/playback head.

   Because shifting can only occur due to a difference in the width of the tape and that of the tape guides (curling will otherwise occur), it is necessary to pay close attention since it can be easily overlooked.

   When there is a shift, tighten screws Ⓑ and Ⓒ equally and change the declination of the head. If the tape is shifting up, tighten the screws, and if it is shifting down, loosen them.
4. Repeat the adjustments in steps 2 and 3 and fine adjust the height and the declination.

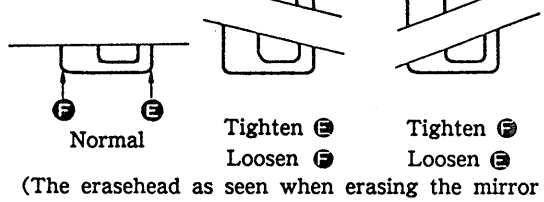
5. **(Preliminary Azimuth Adjustment)**
   After demagnetizing and cleaning the adjustment head, play back WS-48B (3 kHz, 0 dB).
   Turn screw Ⓒ so that the reading on the level meter of the unit or that of the level meter connected to LINE OUT is maximized.
   If the screw is turned at least half a revolution, repeat the adjustments from step 1.
6. **(Tape Path Check)** Connect the oscilloscope to LINE OUT and play back P-4-A100 (10 kHz, -10 dB) to display a resurge waveform. After 20 seconds of record/playback (after the tension within the loop has been increased sufficiently), make sure the variation in the resurge is within ± 90 degrees (within ± 45 degrees is desired). If the variation is greater than this, it is because the declination and/or the height adjustment is not perfect. Repeat the adjustments from step 1.



Erasehead

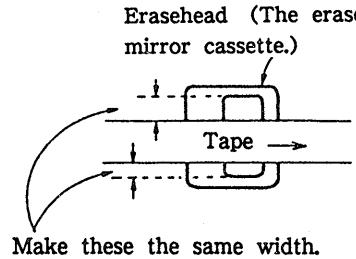
Note : Only perform this adjustment when the erasehead is to be replaced.

1. Insert the mirror cassette and put the unit in record/playback mode.
2. **(Azimuth Adjustment)** Adjust the azimuth of the erasehead by adjusting screws Ⓔ and Ⓕ so that the tape runs as evenly as possible.

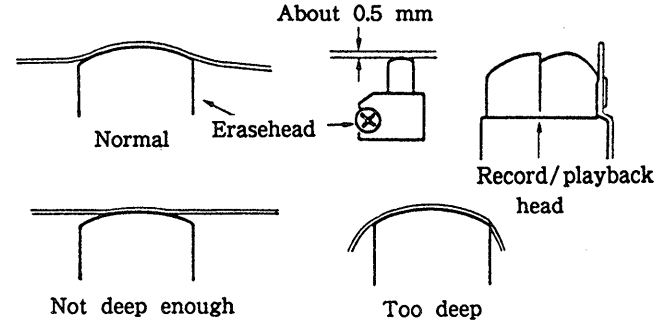


(The erasehead as seen when erasing the mirror cassette.)

3. **(Height adjustment)** Turn screws Ⓓ, Ⓔ, and Ⓕ all by the same angle so that the portions of the erasehead visible at top and bottom are nearly of equal width. If the width at the top is greater, tighten the screws ; if the width at the bottom is greater, loosen the screws.



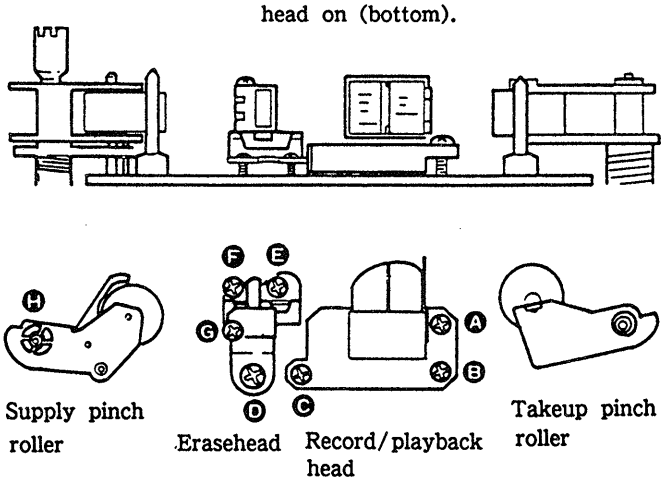
4. **(Declination Adjustment)** Leaving it in the playback position, put the back tension to 0 and make certain the erasehead part and supply pinch roller guide part do not shift. If there is a shift, turn the screw Ⓓ and change the declination. Looking at it using the mirror cassette, if the tape shifts up, tighten the screw, and if it shifts down, loosen the screw.
5. Repeat the adjustments beginning with step 2 and fine adjust the height and declination. And make sure the tape does not curl up on the pinch roller guide or the guide part of the record/playback head.
6. **(Depth Adjustment)** In order to make the entire head play the tape smoothly, and to make sure the depth of the erasehead is neither too shallow nor too deep, loosen screw Ⓒ a bit.



Check

1. Check to make sure that there are no curls or shifts throughout the whole tape path and that the tape runs smoothly.
2. Reapply the locking compound to the adjusted screws. (The locking compound should only be applied to screw Ⓒ after the azimuth has been adjusted.)

Adjustment Position : As seen from the cassette, side (top) and MD as seen head on (bottom).



3-2. ELECTRICAL ADJUSTMENTS

Note: The adjustment should be performed in the order given in this service manual.
The adjustments should be performed for both L-CH and R-CH.

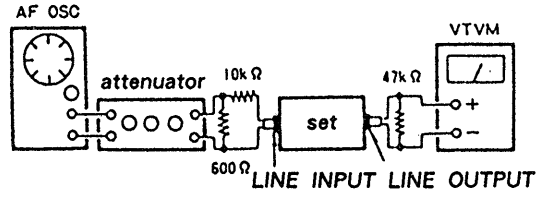
- Simultaneous REC/PB Mode:
  Input the signals to LINE IN terminal and set to REC mode. Set the monitor switch to TAPE, and monitor the recorded signal from LINE OUT terminal.
- Switch Position:
  DOLBY NR ..... OFF
  MPX FILTER ..... OFF
  TIMER ..... OFF
  MONITOR ..... TAPE
  HX PRO ..... OFF
  CALIBRATION ..... OFF
  CD DIRECT ..... OFF
  BIAS ..... CENTER CLICK
  REC LEVEL ..... CENTER CLICK
  BALANCE ..... CENTER CLICK
- Standard Record:
  Deliver the standard input signal level to the input jack and set the REC LEVEL control to obtain the standard output signal level.

  Standard Input Level

Input Terminal	LINE IN
source impedance	10 kΩ
input level	0.25 V (−10 dB)

Standard Output Level

Output Terminal	LINE OUT
load impedance	47 kΩ
output level	0.44 V (−5 dB)



Torque Adjustment and Measurement

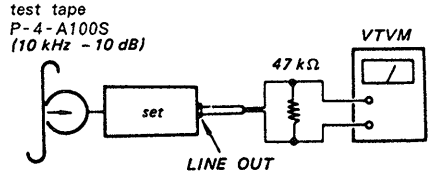
1. Load a torque meter cassette CQ-102C and push ▶ button.
2. Adjust RV801 so that the reading on the torque meter is 40 ± 3g • cm (0.56 ± 0.042oz • inch).
3. After the adjustment, apply suitable locking compound to RV803.

Torque	Torque Meter	Reading
FWD	CQ-102C	35 – 45g•cm (0.49 – 0.64oz•inch)
FWD Back tension	CQ-102C	6.5 – 11g•cm (0.09 – 0.15oz•inch)
FF/REW	CQ-201B	70 – 120g•cm (0.97 – 1.67oz•inch)

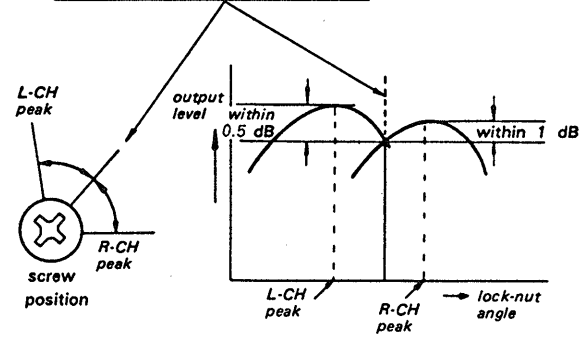
Record/Playback Head Azimuth Adjustment

Procedure :

1. Mode : playback

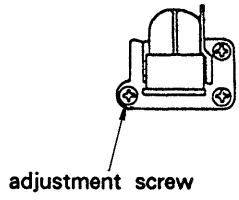


2. Turn the adjustment screw for the maximum output levels. If these levels do not match, turn the adjustment screw until both of output levels match together within 0.5dB.



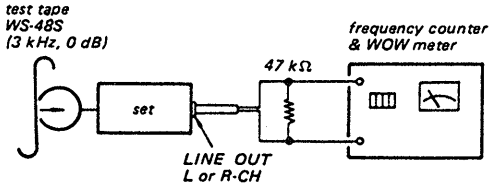
3. Phase check
   By the means of 6. Tape Path check on page 9 confirm that phase difference is proper.
4. After the adjustment, lock the adjustment screw with locking compaund.

Adjustment Location :



Tape Speed/WOW Check

Procedure:



1. Measure the output frequency and the WOW value while playing back the tape top of the test tape.
2. Turn over the test tape, measure the output frequency and the WOW value, and check the difference from the values of the step 1.

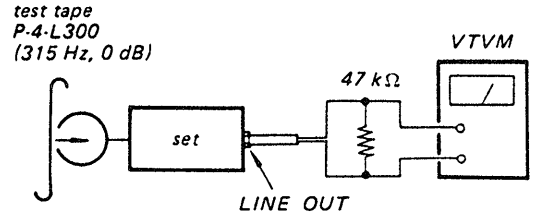
Adjustment Limits :

TAPE SPEED deviation:	within 2,990 to 3,010 Hz
TAPE SPEED fluctuating width:	within 2,990 to 3,010 Hz
WOW (WRMS):	0.037% or less

Playback Level Adjustment

Procedure:

Mode: playback



Adjust RV101 (L-CH) and RV201 (R-CH) to obtain the specified LINE OUT level.

Adjustment Limits :

LINE OUT level : 0.42 to 0.46 V
(−5.3 to −4.7 dB)

Level difference between channels:
less than 0.5 dB

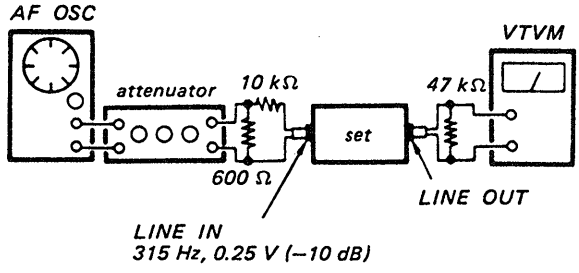
Check that the LINE OUT level does not change in playback mode while changing the mode from playback to stop several times.

MPX FILTER Check

Setting : DOLBY switch : OFF
MPX FILTER switch : OFF

Procedure :

1. Mode: stop



2. Apply 315Hz, 0.25V (−10dB) signal and adjust REC LEVEL (RV501) control so that the LINE OUT level is 0.44V (−5dB).
3. Set DOLBY switch to B or C and MPX FILTER switch ON. Confirm that the LINE OUT level is 0.39V to 0.49V (-5dB ± 1dB).
4. Apply 19kHz 0.25V (-10dB) signal and confirm that the LINE OUT level is 0.013V (-35dB) or less.

Adjustment Limits :

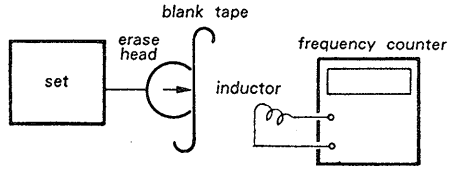
LINE OUT level

315Hz	0.39V − 0.49V (-5dB ± 1dB)
19kHz	0.014V (-35dB)

Bias OSC Frequency Adjustment

Procedure :

1. Record mode



1. Connect the frequency counter to the inductor which functions at 10 mH. (When the inductor is a closed magnetic circuit, redesign the inductor to be anopenmagnetic circuit.
2. Remove the cassette lid, insert the cassette, and put the unit into REC mode.
3. Move the inductor from the side in close to the erase head to check the value of the bias.
4. Adjust CP501 so that the reading on the frequency counter is 105kHz ± 1kHz.

CrO_2 Bias and Record Level Adjustment

Note : This adjustment should be made before Record Bias Adjustment.

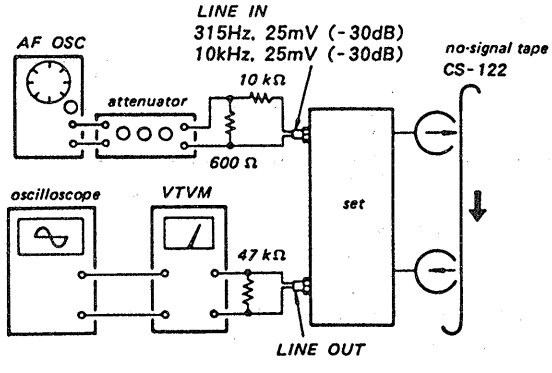
Setting:

REC LEVEL knob: standard record position
(See page 10.)

HX PRO switch : ON

Procedure:

1. Mode: simultaneous REC/PB



2. Adjust RV105 (L-CH) and RV205 (R-CH) so that the playback output level of 10kHz signal is 0.3dB to 0.3dB with respect to that of 315Hz. • • •Record Bias Adjustment.
3. Adjust RV102 (L-CH) and RV202 (R-CH) so that the playback output level of 315Hz is -25.3dB to -24.7dB. • • •Record Level Adjustment.

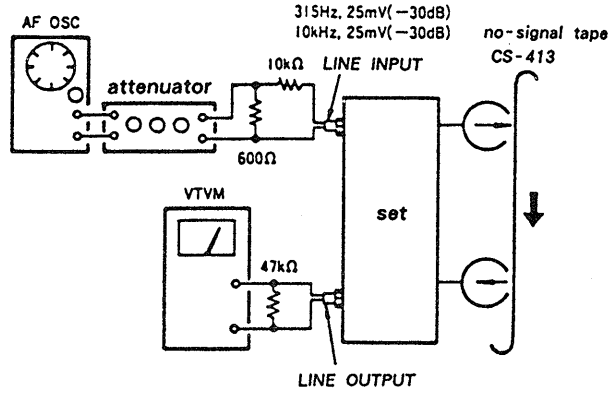
Metal Bias Adjustment

Setting :

REC LEVEL Knob : standard record position
(See page 10.)

Procedure :

1. Mode : simultaneous REC/PB



2. Only when the level difference of 10kHz play back output between L-ch and R-ch is 1dB or more short or open EQ-tap for TYPE-IV (on the conductor side of REC board).
3. Adjust RV510 so that the playback output level of 10kHz in R-CH is 0.5dB to -0.5dB with respect to that of 315Hz.

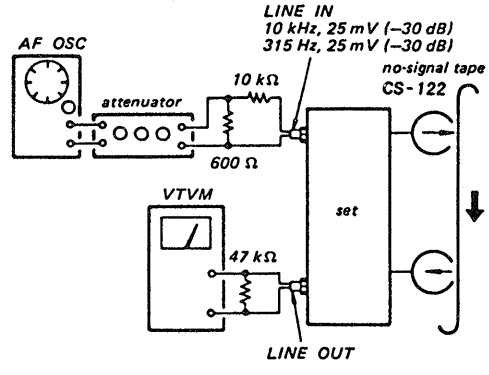
Normal Bias Adjustment

Setting:

REC LEVEL knob: standard record position
(See page 10.)

Procedure:

1. Mode: simultaneous REC/PB



2. Only when the level difference of 10kHz play back output between L-ch and R-ch is 1dB or more short or open EQ-tap for TYPE-I (on the conductor side of REC board).
3. Adjust RV509 so that the output level of 10kHz is 0.5dB to -0.5dB with respect to that of 315Hz.

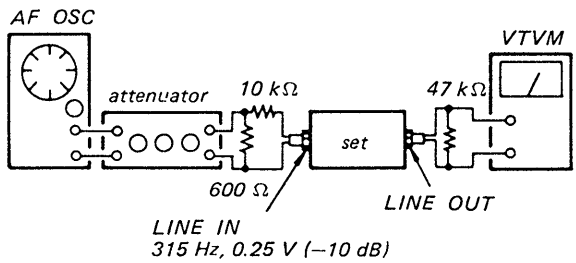
Meter Level Adjustment

Setting :

REC LEVEL Knob : standard record position
(See page 10.)
MONITOR : SOURCE

Procedure :

1. Stop mode



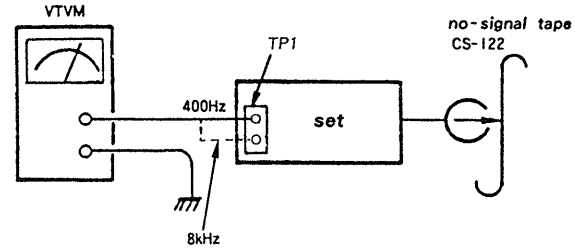
2. Adjust the REC LEVEL (RV501) control so that the LINE OUT level is 0.44V (-5 dB). In this time adjust RV103 (L-CH) and RV203 (R-CH) so that the 0VU (-4 dB) segments of the meter light-up.
3. Adjust the REC LEVEL (RV501) control so that the LINE OUT level is 1.9V (8 dB). In this time, make sure that all the segments of the meter light-up.

Calibration OSC and Calibration Meter Adjustment

Setting : CALBRATION switch : ON

Procedure (OSC OUT LEVEL) :

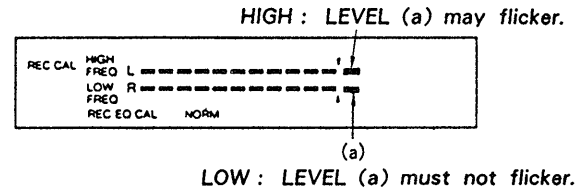
1. Mode : record (no-signal (LINE INPUT))



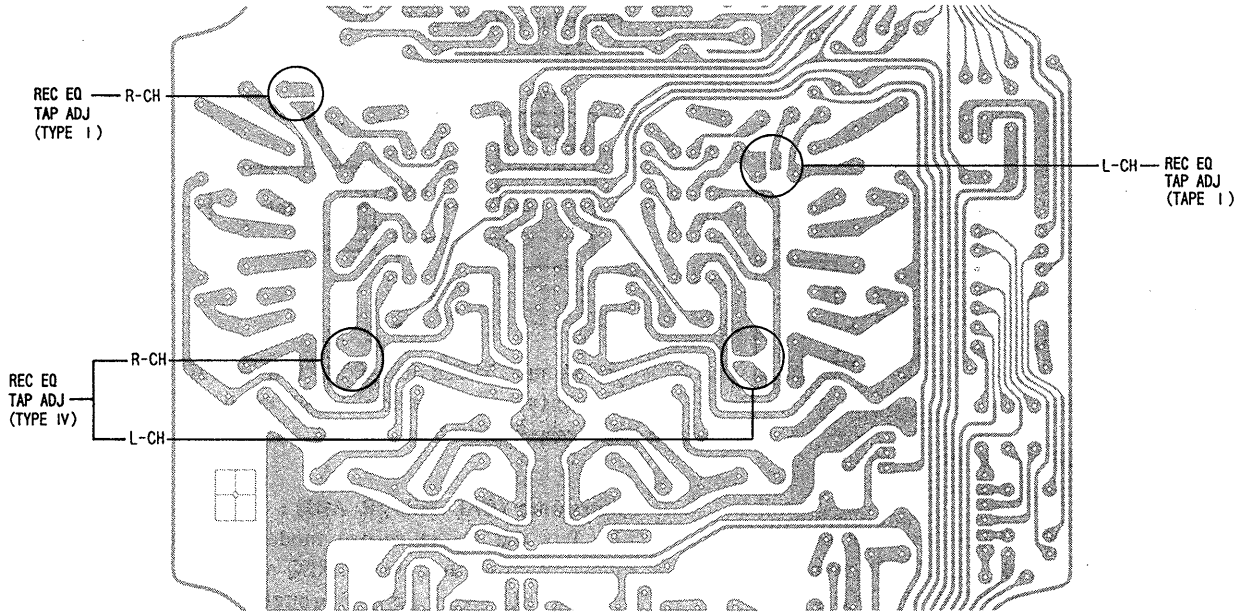
2. Adjust RV508 for 400Hz and RV507 for 8kHz to obtain oscillation level within 10 ± 0.5dB respectively.

Procedure (CAL METER ADJ) :

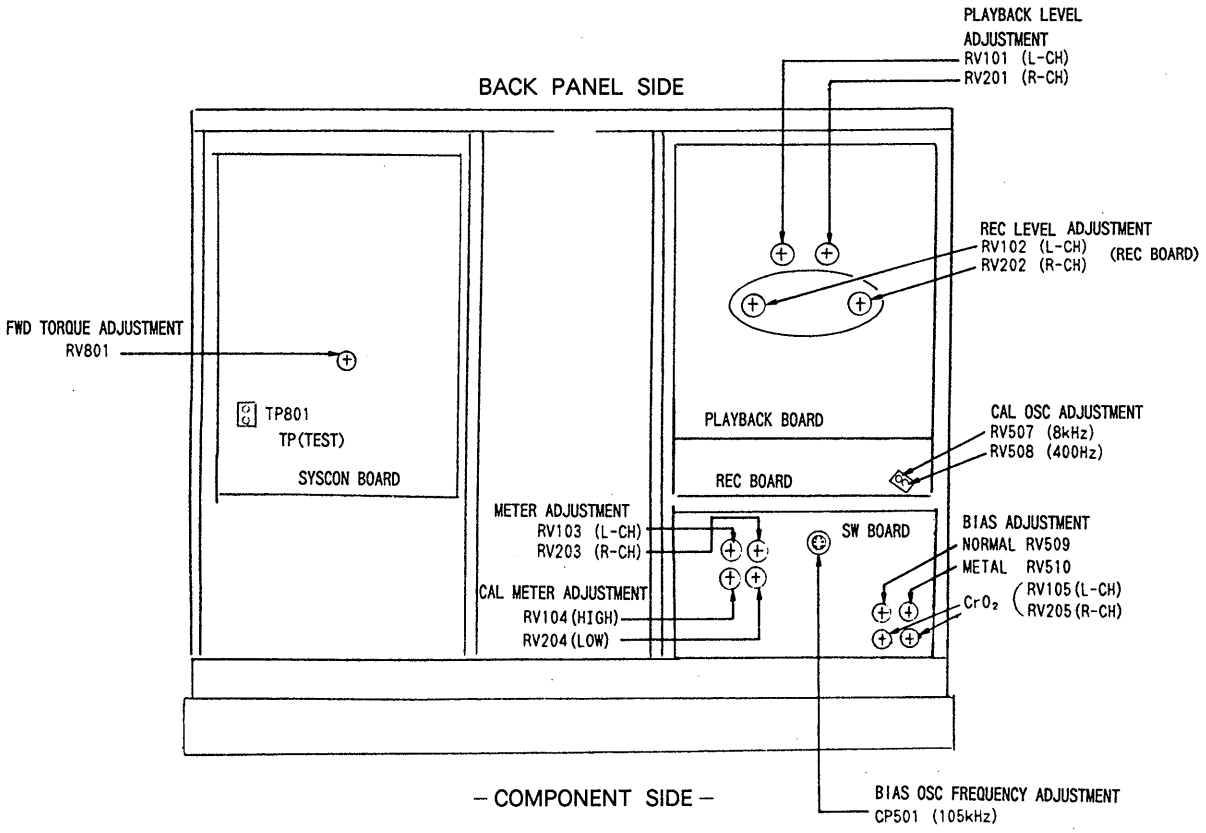
1. Put the set in record mode and adjust RV104 (HIGH) so that HIGH FREQ segments in the CAL LEVEL meter light thoroughly up to 0 VU as shown in the figure below. Segment (a) may flicker.
2. Preset RV204 (LOW) so that segment (a) in LOW FREQ CAL LEVEL meter lights. Then adjust RV204 to the point where segment (a) goes out.



Adjustment Parts Location :



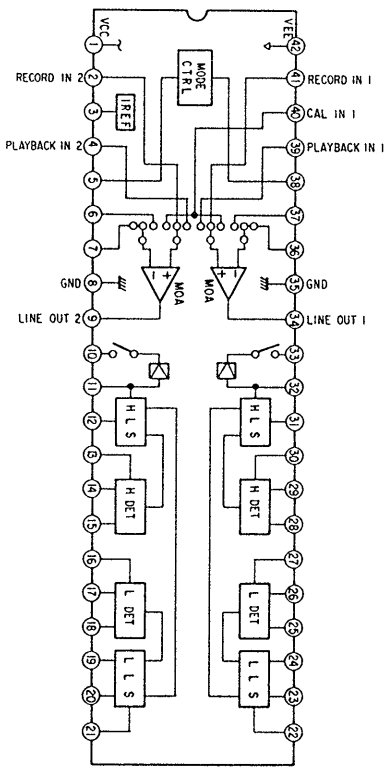
REC BOARD
– CONDUCTOR SIDE –



SECTION 4
DIAGRAMS

4-1-1. IC BLOCK DIAGRAMS

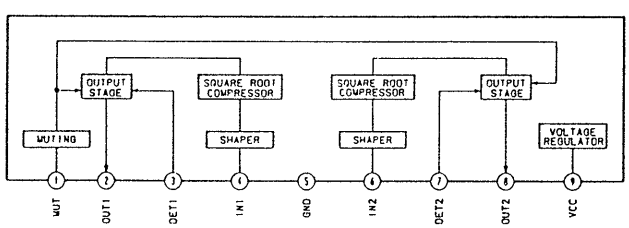
IC503, 505 CX20188



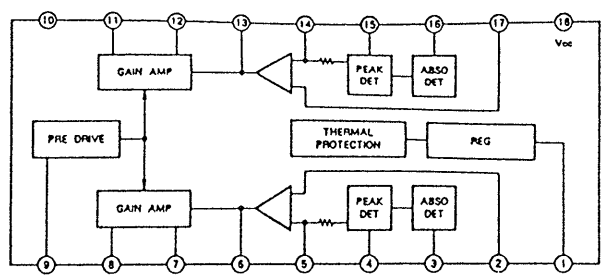
4-2-1. IC503, 505 (CX20188) PIN FUNCTIONS

CX20188 Pin No.	Pin name	Description
1.	Vcc	Positive power supply terminal.
2, 41.	REC IN	Recording input terminal.
3.	I REF	Reference current input terminal.
4, 39.	PB IN	Playback input terminal.
5.	CAL/REC/PB	Calibration/recording/playback select terminal
6, 37.	PB FB	Playback feedback terminal.
7, 36.	REC FB	Recording feedback terminal.
8, 35.	GND	GND terminal.
9, 34.	LINE OUT	Line output (decode output) terminal.
10, 33.	SSK	Spectral skewing switch terminal.
11, 32.	VF IN	Encode circuit input terminal.
12, 31.	HPF H	HLS high-pass filter terminal.
13, 30.	TCH 2	HLS detector time constant terminal 2.
14, 29.	TCH 1	HLS detector time constant terminal 1.
15, 28.	WT H	HLS encoder error reduction terminal.
16, 27.	TCL 2	LLS detector time constant terminal 2.
17, 26.	TCL 1	LLS detector time constant terminal 1.
18, 25.	WT L	LLS encoder error reduction terminal.
19, 24.	HPF L	LLS high-pass filter terminal.
20, 23.	ANT S	Anti-saturation terminal.
21, 22.	REC OUT	Recording output (encode output) terminal.
38.	OFF/B/C	Dolby NR off/B type/C type select terminal.
40.	CAL IN	Calibration input terminal.
42.	Vee	Negative power supply terminal.

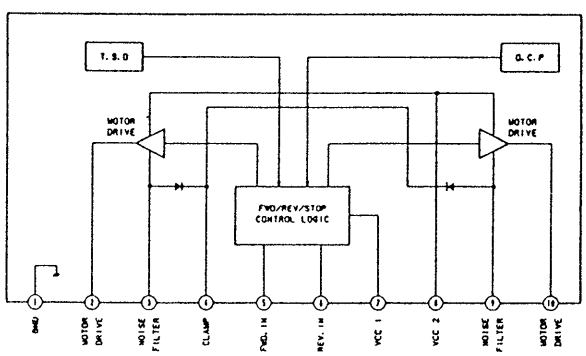
IC512 BA6138



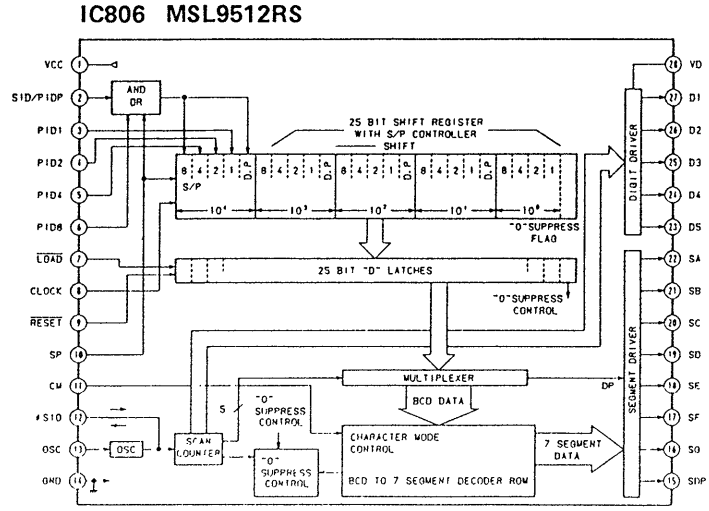
IC517 μPC1297CA



IC803 BA6219B
IC804 LB1641



IC806 MSL9512RS

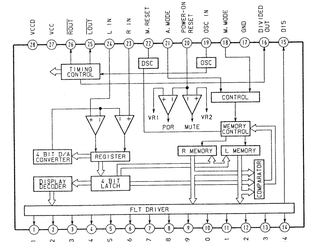


4-2-2. IC801 (M50964-220SP) PIN FUNCTIONS

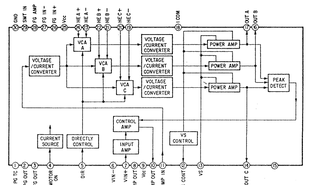
Pin No.	Pin name	I/O	Description
1.	VCC		Power supply: +5V.
2.	AVss		Analog GND.
3.	Vref	I	A/D port reference voltage input.
4.	DA		Not used for this model.
5.	PWM		Not used for this model.
6.	P.OFF		Not used for this model. Connected to GND.
7.	$\overline{\text{LED}}$	O	PAUSE LED output.
8.	$\overline{\text{LED}}$	O	REC LED output.
9.	$\overline{\text{LED}}$	O	PLAY LED output.
10.	AD1	I	Key input. 0V=⏏, 1V=■, 2V=⏪, 3V=⏩, 4V=●.
11.	AD2	I	Key input. 0V=▶, 1V=⏸, 2V=⏮, 3V=⏭, 4V=○.
12.	AMS SIG	I	AMS signal input. No song detected = Low. Song detected = High.
13.	AD4	I	Key input. 2V = DISPLAY. 3V = MONITOR.
14.	CODE	I	Remote control category select switch.
15.	ALB		Connected to 5V.
16.	ϕR	I	Take-up reel base sensor input.
17.	ϕL	I	Supply reel base sensor input.
18.	C RESET		Model select input. Connected to GND.
19.	C MEMORY		Model select input. Connected to GND.
20.	COO		Not used for this model.
21.	POWER IN	I	Power on and off detection.
22.	SIRW	I	SIRCS phase input.
23.	$\overline{\text{SIRE}}$	I	SIRCS reverse phase input.
24.	$\overline{\text{T-REC}}$	I	Timer REC switch input.
25.	$\overline{\text{T-PLAY}}$	I	Timer PLAY switch input.
26.	$\overline{\text{INT}}$	I	External interruption input. Interruption process is performed when the power is on or off.
27.	Vss		GND.
28.	$\overline{\text{RESET}}$	I	Reset input.
29.	XIN	I	Clock input (4 MHz).
30.	XOUT	O	Clock output (4 MHz).
31.	ϕout		Not used for this model.
32.	Vss		GND.
33.	$\overline{\text{C1}}$	I	Rotary encoder input to detect the position of the head base of the mechanical block.
34.	$\overline{\text{C2}}$	I	Rotary encoder input to detect the position of the head base of the mechanical block.
35.	$\overline{\text{C3}}$	I	Rotary encoder input to detect the position of the head base of the mechanical block.
36.	$\overline{\text{C4}}$	I	Rotary encoder input to detect the position of the head base of the mechanical block.
37.	$\overline{\text{OPEN SW}}$	I	OPEN switch input of the mechanical block.
38.	$\overline{\text{CLOSE SW}}$	I	CLOSE switch input of the mechanical block.
39.	$\overline{\text{DOOR SW}}$	I	DOOR switch input of the mechanical block.
40.	$\overline{\text{REC SW}}$	I	REC switch input of the mechanical block.
41.	M PLAY	O	Reel motor rotates at PLAY speed.
42.	M FAST	O	Reel motor rotates at FF/REW speed.
43.	M FWD	O	Reel motor rotates.
44.	M REV	O	Reel motor rotates in reverse.
45.	CAM DOWN	O	Head base DOWN output of the mechanical block
46.	CAM UP	O	Head base UP output of the mechanical block
47.	C OFF	O	Counter light-off output
48.	M OFF	O	Meter light-off output
49.	BIAS	O	Bias oscillation on and off control
50.	$\overline{\text{R Mt}}$	O	REC MUTE.
51.	$\overline{\text{M Mt}}$		Not used for this model.
52.	$\overline{\text{T Mt}}$	O	Tape MUTE. Goes to low when the tape is being played.
53.	$\overline{\text{S Mt}}$	O	Source MUTE. Goes to low three seconds after the power is on.
54.	AMS	O	AMS switch output. Goes to low when AMS is being used.
55.	MONITOR		Not used for this model. Connected to GND.
56.	$\overline{\text{HALF}}$		Not used for this model. Connected to GND.
57.	DAT3	O	Outputs parallel data for the counter display.
58.	DAT2	O	Outputs parallel data for the counter display.
59.	DAT1	O	Outputs parallel data for the counter display.
60.	DAT0	O	Outputs parallel data for the counter display.
61.	DATD	O	Outputs parallel data for the counter display.
62.	CLK	O	Clock output to transmit the parallel data.
63.	LATCH	O	Output for latching the transmitted data.
64.	CAL IN	I	CAL switch input.

4-1-2. IC BLOCK DIAGRAMS

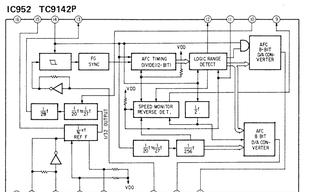
IC514 MSL9359RS



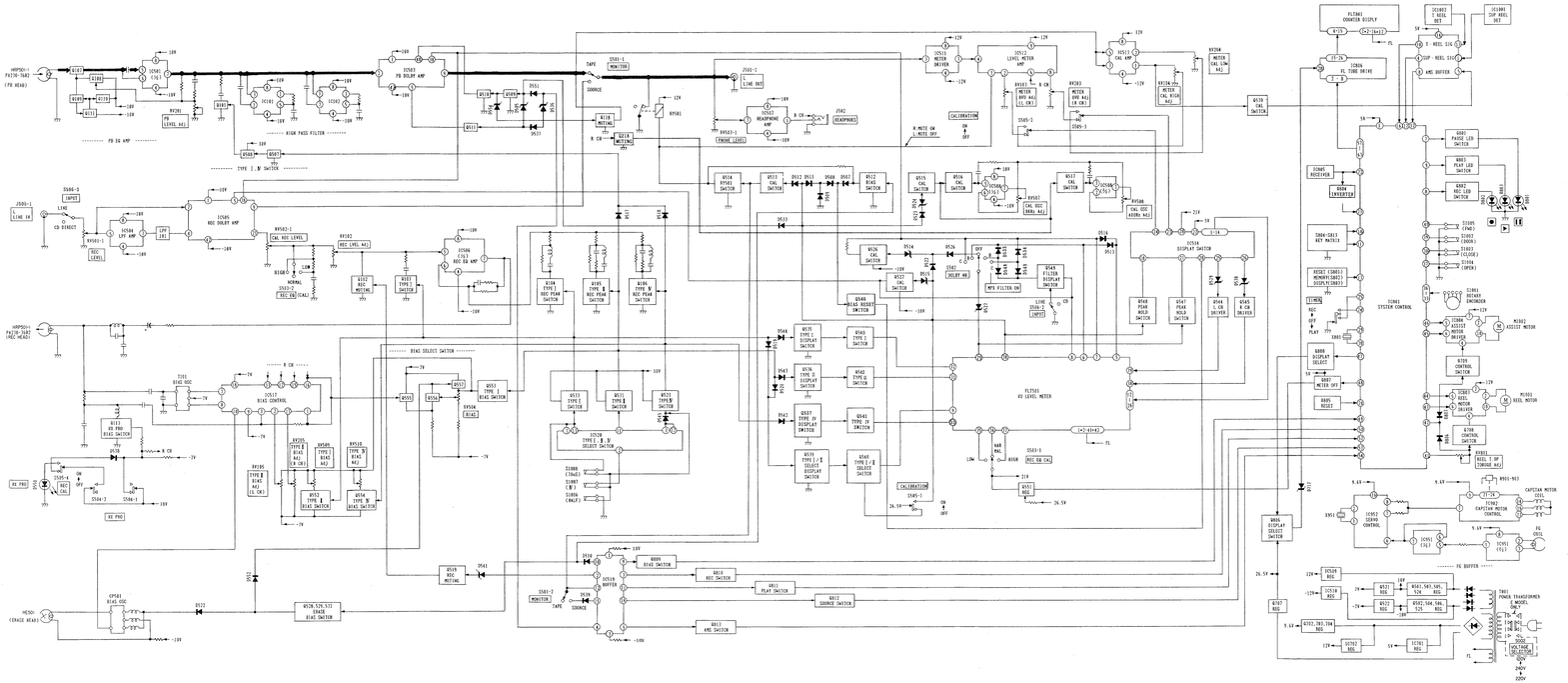
IC902 CX20174



IC952 TC9142P



4-3. BLOCK DIAGRAM



4-4. SEMICONDUCTOR LEAD LAYOUTS

– AUDIO SECTION –

UZS9A2L
RD5.1JS-B1

2SA985A
2SC2275A

2SK170

RC79L12A

1SS202-1
HZ6B2L
UZL-7M1

2SA1015-GR
2SC945-P
2SC1815-GR
2SD756

2SK246-GR2

DTA114ES
DTA124ES
DTA144ES
DTC114ES
DTC124ES
DTC144ES
2SC2458-YGR
2SC9623A-LK

2SA1138-F
2SC2676

BA6138

2SA1175-HFE
2SD1021

RC78L12A

– SYSCON SECTION –

HZS6C1L
HZS6C3L
HZ527-2L
RD5.1JS-B1

SEL2810A-C

2SB1187-EF

GP1U52XB

SEL4214S-C
SEL4414E
SEL4814A-CD

2SD1761-EF

GPS22B

OH009

DTA114ES
DTA144ES
DTC144ES

BA6219

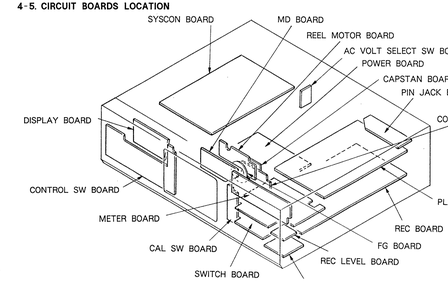
S4VB60

10E2N
1SS202-1
30DF2

2SA733-OP
2SC945-P

M5F7805
M5F7812

4-5. CIRCUIT BOARDS LOCATION



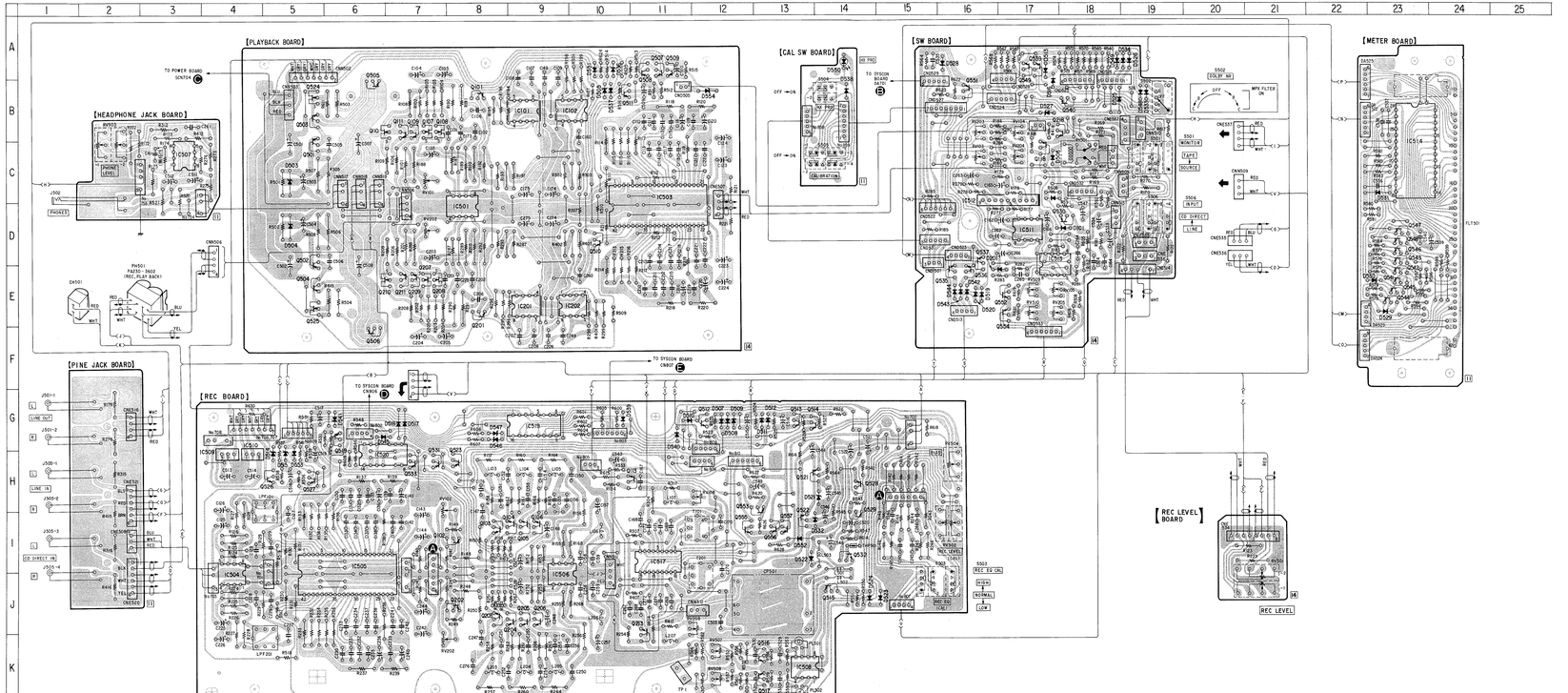
4-6. PRINTED WIRING BOARDS – AUDIO SECTION –

• Semiconductor Location

Ref. No.	Location	Ref. No.	Location	Ref. No.	Location	Ref. No.	Location	Ref. No.	Location
D101	D-18	D532	I-13	IC505	I-6	Q205	J-9	Q525	E-5
D201	D-16	D533	B-19	IC506	J-9	Q206	J-9	Q526	H-5
D503	C-5	D534	A-19	IC507	C-3	Q207	E-7	Q527	H-5
D504	D-5	D535		IC508	K-13	Q208	E-7	Q528	H-14
D505	B-10	D536	A-10	IC509	H-4	Q209	E-7	Q529	I-14
D506	C-17	D537	B-10	IC510	G-4	Q210	E-6	Q530	D-17
D507	G-12	D538	B-14	IC511	D-17	Q211	E-7	Q531	H-7
D508	G-12	D539	G-10	IC512	C-16	Q213	J-11	Q532	I-14
D509	G-12	D540	G-11	IC513	D-17	Q218	B-17	Q533	H-7
D510	G-11	D541	G-6	IC514	C-23	Q501	C-5	Q535	E-16
D511	G-13	D542	E-16	IC517	I-11	Q502	D-5	Q536	E-16
D512	G-13	D543	E-16	IC519	G-9	Q503	B-5	Q537	D-16
D513	A-17	D544	E-16	IC520	H-6	Q504	E-5	Q539	A-17
D514	H-5	D545	G-6			Q505	A-6	Q540	B-18
D515	H-5	D546	G-8	Q101	B-8	Q506	F-6	Q541	E-23
D516	B-17	D547	G-8	Q102	I-7	Q507	A-11	Q542	E-23
D517	G-7	D548	B-19	Q103	I-8	Q508	B-11	Q543	D-23
D518	G-7	D549	A-18	Q104	I-8	Q509	A-11	Q544	E-23
D519	G-6	D550	A-14	Q105	I-9	Q510	D-10	Q545	E-23
D520	E-16	D551	A-10	Q106	I-9	Q511	B-10	Q546	D-23
D521	H-13	D552	I-13	Q107	B-7	Q512	G-12	Q547	D-23
D522	I-14	D553	H-5	Q108	B-7	Q513	G-13	Q548	D-23
D523	J-15	D554	B-12	Q109	B-7	Q514	G-13	Q549	A-17
D524	J-14			Q110	B-6	Q515	J-14	Q551	B-16
D525	B-18	IC101	B-9	Q111	B-7	Q516	K-13	Q552	E-17
D526	A-19	IC102	B-9	Q113	H-10	Q517	K-13	Q553	H-12
D527	B-17	IC201	E-9	Q118	C-17	Q519	G-8	Q554	E-17
D528	A-16	IC202	E-9	Q201	E-8	Q521	H-13	Q555	I-12
D529	E-23	IC501	D-8	Q202	J-8	Q522	I-13	Q556	I-13
D530	E-23	IC503	C-11	Q203	J-8	Q523	H-8	Q557	I-13
D531	C-23	IC504	J-4	Q204	J-9	Q524	B-5		

Note on Mounting Diagram:

• ⟵ : parts extracted from the component side.



4-7. SCHEMATIC DIAGRAM – AUDIO SECTION –

Note on Schematic Diagram:

- All capacitors are in µF unless otherwise noted. pF: µµF 50WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and 1/4 W or less unless otherwise specified.
- Components for right channel have same values as for left channel. Reference numbers are coded from 200, 400.
- △ : internal component.
- [nonflammable resistor symbol] : nonflammable resistor.
- [fusible resistor symbol] : fusible resistor.

Note:	Note:
The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.	Les composants identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

- B+ : B+ Line
- B– : B– Line
- ☐ : adjustment for repair
- Voltage and waveforms are dc with respect to ground under no-signal conditions.
  no mark: STOP
  ▶ : PLAY
  ⊡ : REC
  ▶▶ : FF
  ◀◀ : REW
  ▲ : EJECT
  ◀◀, ▶▶ : AMS
- Voltages are taken with a VOM (Input impedance 10 MΩ) Voltage variations may be noted due to normal production tolerances.
- Signal path.
  ⊳ : PB
  ⊳⊳ : REC

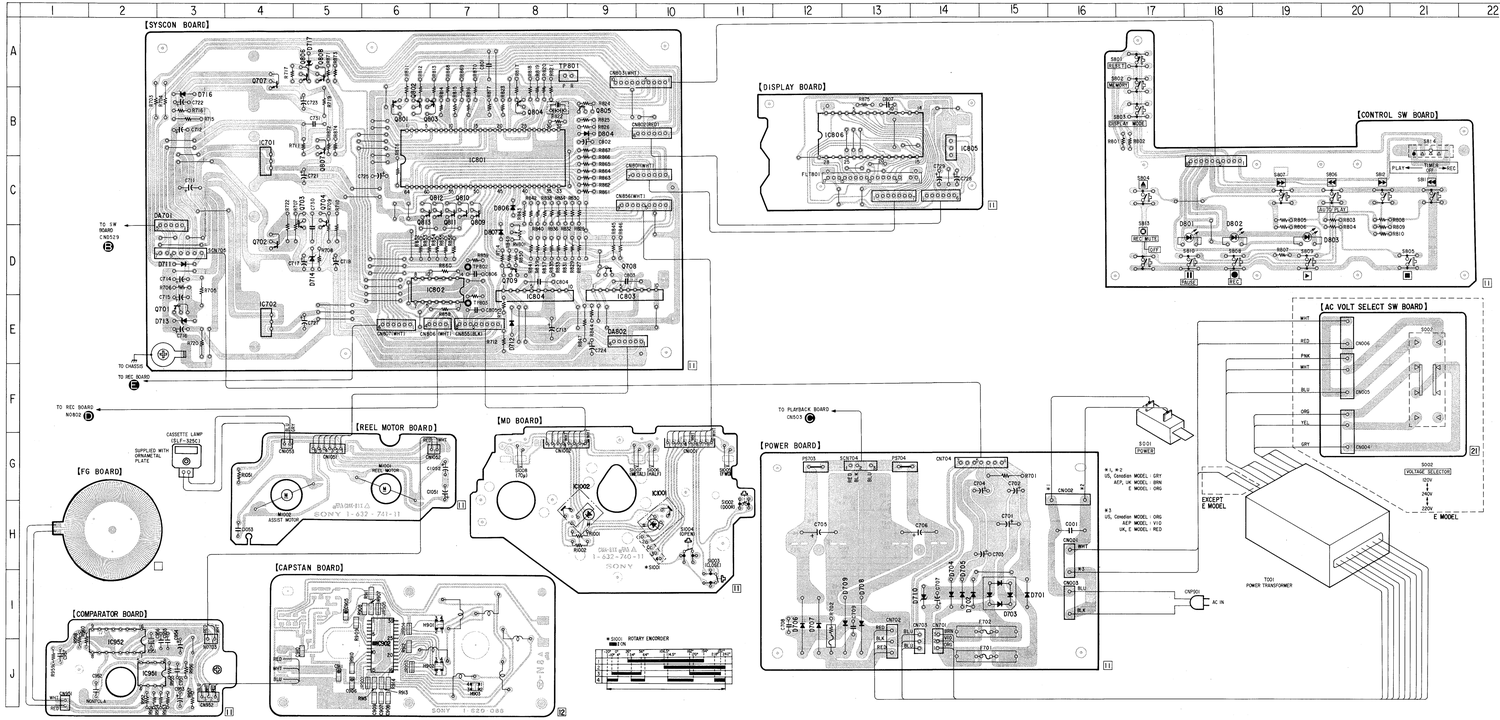
4-8. PRINTED WIRING BOARDS – SYSCON SECTION –

• Semiconductor Location

Ref. No.	Location	Ref. No.	Location
D701	I-15	IC805	B-14
D702	I-14	IC806	B-12
D703	I-15	IC902	J-6
D704	I-14	IC951	J-2
D705	I-14	IC952	J-2
D706	I-12	IC1001	G-10
D707	I-12	IC1002	G-9
D708	I-13		
D709	I-13	Q701	E-3
D710	I-14	Q702	D-4
D711	D-3	Q703	C-5
D712	E-8	Q704	C-5
D713	E-3	Q707	A-4
D714	D-5	Q708	D-9
D716	B-3	Q709	D-8
D717	A-5	Q801	B-6
D801	D-18	Q802	B-6
D802	D-18	Q803	B-6
D803	D-20	Q804	B-8
D804	B-9	Q805	B-9
D806	C-8	Q806	A-5
D807	D-7	Q807	C-5
		Q808	A-5
IC701	B-4	Q809	C-7
IC702	E-4	Q810	C-7
IC801	C-7	Q811	C-7
IC802	D-7	Q812	C-7
IC803	E-9	Q813	C-6
IC804	E-8		

Note on Mounting Diagram:

● ◇——: parts extracted from the component side.



4-9. SCHEMATIC DIAGRAM – SYSCON SECTION –

【DISPLAY BOARD】
FLT 801
COUNTER DISPLAY
IC806
MSL9512RS
FL TUBE DRIVE
IC805
GP1U52XB
RECEIVER
【CONTROL SW BOARD】
D803 SEL4414E
D802 SEL4214S
D801 SEL4814A
RESET
MEMORY
MODE
TIMER
REC
OFF
PLAY
【SYSCON BOARD】
IC802
MC14069UBCP
AMS BUFFER(3/1)
S-REEL SIGNAL BUFFER(3/3)
T-REEL SIGNAL BUFFER(3/2)
IC801
M50964-220SP
SYSTEM CONTROLLER
Q803 Q802 Q801
2SA1348
FWD REC PAUSE
LED SWITCH
Q804
2SA1348
REMOTE SWITCH
Q809-Q813
2SA1345
Q809 BIAS
Q810 REC
Q811 PLAY
Q812 SOURCE
Q813 AMS
IC803
BA6219B
REEL MOTOR DRIVE
Q709
2SA733
MOTOR CONTROL
IC804
BA6219B
ASSIST MOTOR DRIVE
Q708
2SA733
MOTOR CONTROL
REEL T.UP TORQUE ADJ
D806
1SS132
D807
1SS132
D712
10E2-N
Q808
2SC945
DISPLAY SELECT
Q807
2SC945
MOTOR OFF
Q805
2SC945
RESET
D804
1SS132
Q702 2SB1187
Q703 2SC945
Q704 2SC945
REG
IC702
M5F7812
REG
IC701
M5F7805
REG
Q701 2SA733
REG
D713 HZS6C1L
D714
UZL6H1
D717
RD5,1JS-B1
D716
HZS27IL
D711
1SS132
Q806
2SA723
DISPLAY SELECT SWITCH
Q707
2SD1761
REG
TO SYSCON BOARD NO803
TO REC BOARD NO802
【MD BOARD(2/2)】
IC1001, IC1002
GP2522B
S1006 (HALF)
S1007 (METAL)
S1008 (70μ)
【REEL MOTOR BOARD】
M1002 ASSIST MOTOR
M1001 REEL MOTOR
(CASSETTE LAMP)
SLF-325C
SUPPLIED WITH ORNAMENTAL PLATE
【COMPARATOR BOARD】
IC952
TC-9142P
SERVO CONTROL
IC951
μPC4557C
FG BUFFER
【FG BOARD】
FG COIL
【MD BOARD(1/2)】
S1001
ROTARY ENCODER
S1004 (OPEN)
S1003 (CLOSE)
S1002 (DOOR)
S1005 (FWD)
(REC PROTECT)
【CAPSTAN BOARD】
IC902
CX-20174
CAPSTAN CONTROL
H901-903
OH009
CAPSTAN MOTOR COIL
【POWER BOARD】
TO PLAY BACK BOARD CN503
TO SW BOARD CND529
D706-D709
30DF2-FC
D701, D702
1SS132
D703
S2VE20
D704, D705
10E2N
D710
HZS6C3L
T001
POWER TRANSFORMER
【AC VOLT SELECT BOARD】
E MODEL
UK MODEL
US Canadian AEP WG MODEL
S001 POWER
VOLTAGE SELECTOR
※NOT REPLACEABLE :BUILT IN TRANSFORMER

Note on Schematic Diagram:

- All capacitors are in μF unless otherwise noted. pF: μμF 50WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and 1/4 W or less unless otherwise specified.
- Components for right channel have same values as for left channel. Reference numbers are coded from 200, 400.
- △ : internal component.
- : nonflammable resistor.
- : fusible resistor.

Note:	Note:
The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.	Les composants identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

- B+ : B+ Line
- B– : B– Line
- ☐ : adjustment for repair
- Voltage and waveforms are dc with respect to ground under no-signal conditions.
  - no mark: STOP
  - ▶ : PLAY
  - ⊡ : REC
  - ❚❚ : PAUSE
  - ▶▶ : FF
  - ◀◀ : REW
  - ▲ : EJECT
  - ⏮, ⏭ : AMS
- Voltages are taken with a VOM (Input impedance 10 MΩ) Voltage variations may be noted due to normal production tolerances.

SECTION 5
EXPLODED VIEWS

NOTE:

- The mechanical parts with no reference number in the exploded views are not supplied.
- The construction parts of an assembled part are indicated with a collation number in the remark column.
- Items marked "★" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- Due to standardization, parts with part number suffix -XX and -X may be different from the parts specified in the components used on the set.
- Color Indication of Appearance Parts
  Example:
  (RED) . . . KNOB, BALANCE (WHITE)
  ↑ Cabinet's Color ↑ Parts' Color

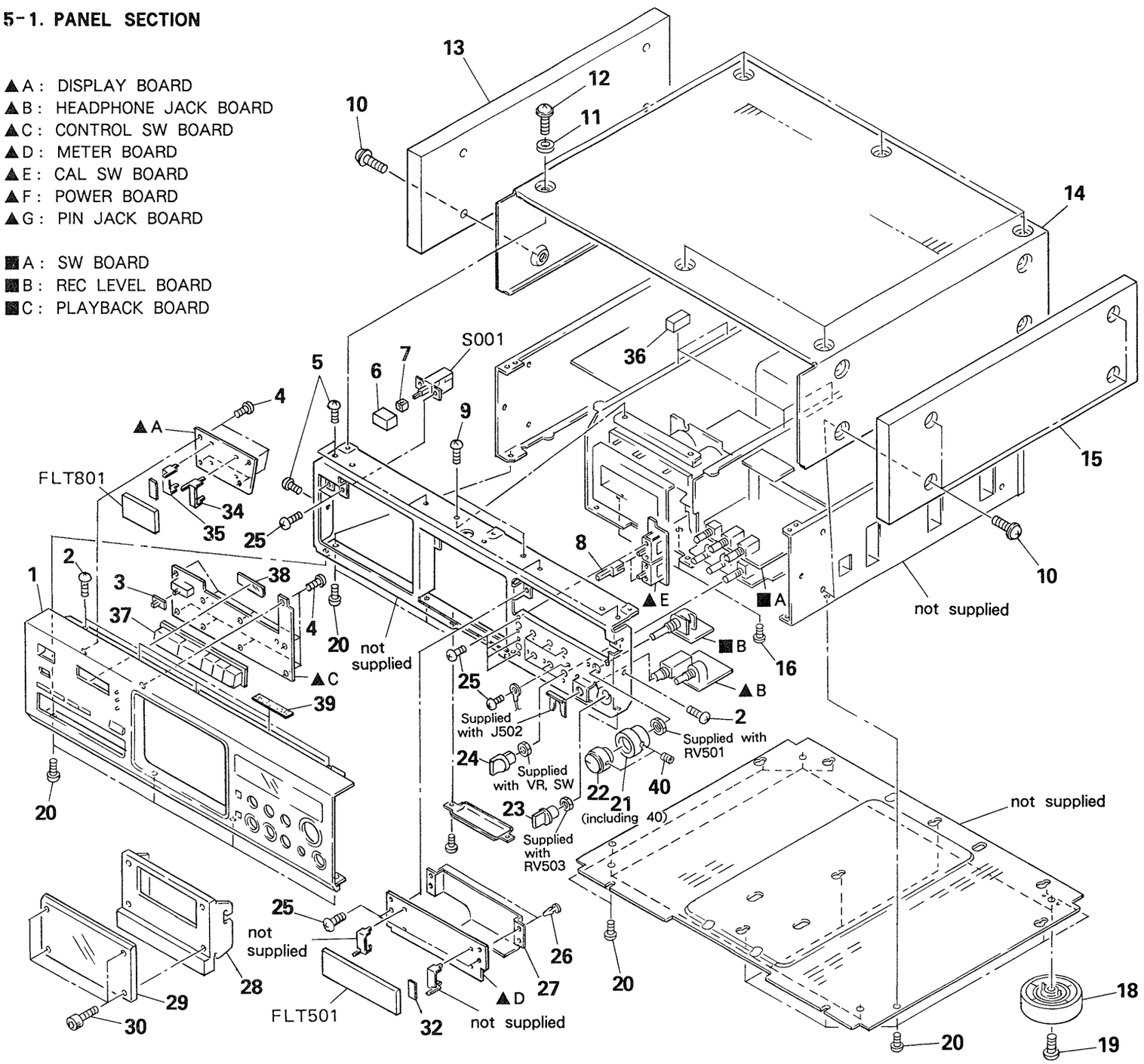
The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

Les composants identifiés par une marque ⚠ sont critiques pour la sécurité.
Ne les remplacer que par une pièce portant le numéro spécifié.

5-1. PANEL SECTION

▲A : DISPLAY BOARD
▲B : HEADPHONE JACK BOARD
▲C : CONTROL SW BOARD
▲D : METER BOARD
▲E : CAL SW BOARD
▲F : POWER BOARD
▲G : PIN JACK BOARD

■A : SW BOARD
■B : REC LEVEL BOARD
■C : PLAYBACK BOARD

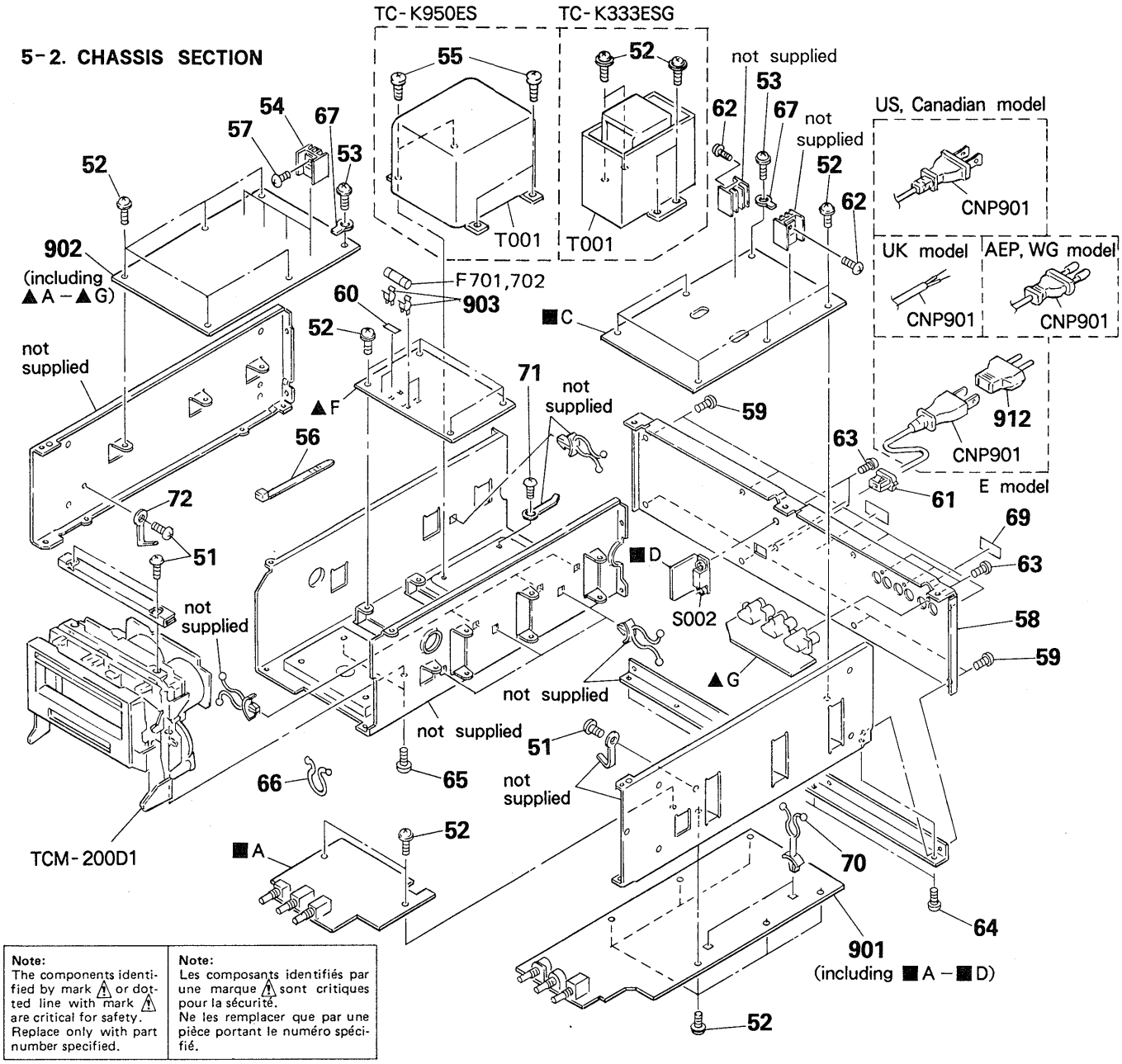


No.	Part No.	Description	Remarks
1	A-2003-464-A	(E).....PANEL ASSY, FRONT	
	A-2003-549-A	(US,Canadian)...PANEL ASSY, FRONT	38
	A-2003-551-A	(AEP,WG).....PANEL ASSY, FRONT	38
	A-2003-631-A	(UK).....PANEL ASSY, FRONT	
2	7-682-547-09	SCREW +B 3X6	
3	4-922-518-11	KNOB (TIMER)	
4	7-685-133-19	SCREW +BTP 2.6X6 TYPE2 N-S	
5	7-682-547-09	SCREW +BV 3X6, S TIGHT	
6	4-908-046-01	KNOB, SQUARE	
7	4-864-307-00	RING	
8	3-350-473-01	BUTTON	
9	7-685-870-01	SCREW +BVTT 3X5 (S)	
10	4-820-330-31	(UK)....SCREW, BW, PLUS MINUS	
	4-885-979-11	(EXCEPT UK).....SCREW (4X25)	
11	4-923-474-01	RING, ORNAMENTAL	
12	3-704-366-01	SCREW (CASE) (M3X8)	
13	X-3304-959-1	(US,Canadian,AEP,E)..PANEL(L) ASSY, SIDE	
	X-3304-969-1	(WG).....PANEL(L) ASSY, SIDE	
14	3-350-489-01	CASE	
15	X-3304-960-1	(US,Canadian,AEP,E)..PANEL(R) ASSY, SIDE	
	X-3304-970-1	(WG).....PANEL(R) ASSY, SIDE	
16	7-682-548-04	SCREW +BVTT 3X8 (S)	
18	X-3304-944-1	FOOT ASSY	
19	7-685-882-09	SCREW +BVTT 4X10 (S)	
20	3-703-685-21	SCREW (+BV 3X8)	
21	X-3304-924-1	KNOB (LEFT) ASSY, REC	
22	X-3304-925-1	KNOB (RIGHT) ASSY, REC	
23	3-346-380-11	KNOB (VOL)	
24	3-350-474-01	KNOB (DIA. 12), FLAT	
25	7-685-870-09	SCREW +BVTT 3X5 (S)	
26	4-812-134-11	RIVET NYLON, 3.5	
27	*3-356-940-01	PLATE, SHIELD	
28	3-356-923-01	LID, CASSETTE	
29	3-356-922-01	(E).....WINDOW, CASSETTE	
	3-356-922-21	(EXCEPT E)...WINDOW, CASSETTE	
30	3-356-942-01	SCREW (2.6X6), TAPPING	
32	9-911-863-XX	SPACER	
34	*3-350-476-01	BRACKET (FL)	
35	*3-356-938-01	BRACKET (FL)	
36	9-911-842-XX	CUSHION (S)	
37	X-3304-958-4	BUTTON ASSY	
38	3-350-471-11	(EXCEPT UK,E)...WINDOW, COUNTER	
39	9-911-835-XX	CUSHION, F	
40	3-701-505-00	SET SCREW, DOUBLE POINT 3X3	
FLT501	1-519-497-11	INDICATOR TUBE, FLUORESCENT	
FLT801	1-519-567-11	INDICATOR TUBE, FLUORESCENT	
S001	⚠1-554-920-11	SWITCH, PUSH (AC POWER)(1 KEY)	

▲A : DISPLAY BOARD
▲B : HEADPHONE JACK BOARD
▲C : CONTROL SW BOARD
▲D : METER BOARD
▲E : CAL SW BOARD
▲F : POWER BOARD
▲G : PIN JACK BOARD

■A : SW BOARD
■B : REC LEVEL BOARD
■C : PLAYBACK BOARD
■D : AC VOLT SELECT SW BOARD

5-2. CHASSIS SECTION

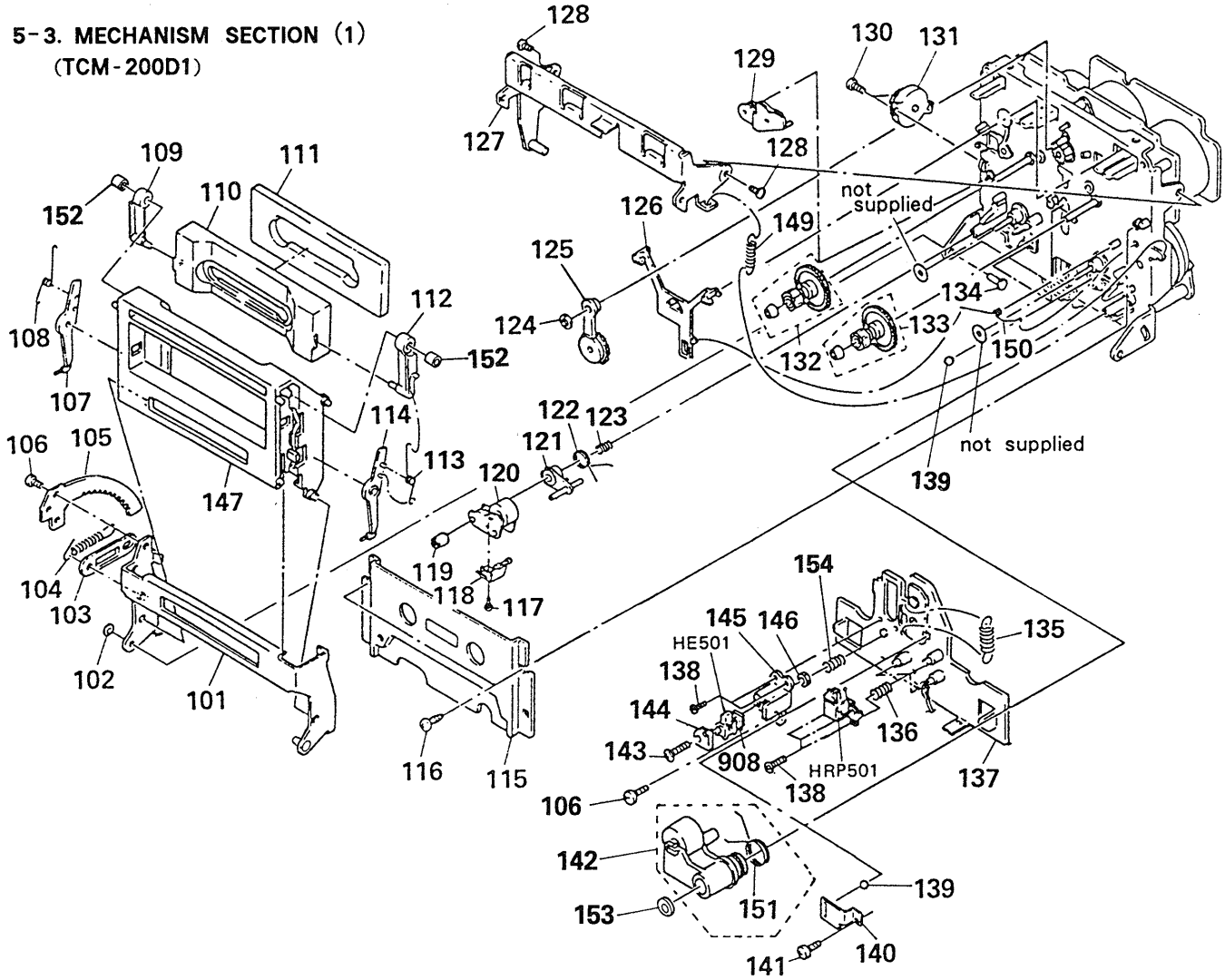


Note:	Note:
The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.	Les composants identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

No.	Part No.	Description	Remarks
51	7-685-870-09	SCREW +BVTT 3X5 (S)	
52	4-886-821-01	SCREW, S TIGHT, +PTTWH 3X6	
53	7-682-548-04	SCREW, TIGHT, S	
54	*4-363-146-21	HEAT SINK, V.OUT	
55	4-820-330-31	SCREW	
56	3-655-653-21	BAND (TAITON), BINDING	
57	7-685-646-79	SCREW +BVTP 3X8 TYPE2 IT-3	
58	*3-350-482-01	(EXCEPT E)...PANEL, BACK	
	*3-350-482-11	(E).....PANEL, BACK	
59	7-682-547-09	SCREW +BV 3X6, S TIGHT	
60	3-701-947-15	(AEP,UK,WG,E)...LABEL (T2.5A), FUSE	
	3-703-044-26	(US,Canadian)...LABEL, CAUTION	
61	*3-703-244-00	(AEP,UK,WG)...BUSHING (2104), CORD	
	4-916-783-01	(US,Canadian,E).....BUSHING, CORD	
62	7-682-147-15	SCREW, TR	
63	7-685-647-79	SCREW +BVTP 3X10 TYPE2 N-S	
64	3-703-685-21	SCREW (+BV 3X8)	
65	7-685-645-79	SCREW +BVTP 3X6 TYPE2 SLIT	
66	3-315-159-01	PURSE LOCK (DIA. 14)	
67	4-870-539-00	PLATE, GROUND	
68	7-682-547-04	SCREW +BVTT 3X6 (S)	
69	*3-703-456-01	(AEP,WG,UK)...LABEL, AMS LICENSE	

No.	Part No.	Description	Remarks
70	*4-308-851-00	PURSE LOCK	
71	7-682-548-04	SCREW +BVTT 3X8 (S)	
72	*3-701-822-00	HOLDER, WIRE	
901	A-2006-185-A	MOUNTED PCB, AUDIO	
902	A-2006-266-A	(E).....MOUNTED PCB, SYSTEM CONTROL	
	A-2006-287-A	(EXCEPT E)...MOUNTED PCB, SYSTEM CONTROL	
903	1-533-183-11	HOLDER, FUSE	
912	⚠1-569-007-11	(E)...ADAPTOR, CONVERSION 2P	
CNP901	⚠1-559-297-31	(E).....CORD, POWER	
CNP901	⚠1-559-479-11	(US,Canadian)...CORD, POWER	
CNP901	⚠1-574-383-11	(AEP,WG)...CORD, POWER	
CNP901	⚠1-574-384-11	(UK).....CORD, POWER	
F701	⚠1-532-286-00	(AEP,WG,UK,E)...FUSE, TIME-LAG (2.5A)	
F701	⚠1-532-744-11	(US,Canadian)...FUSE, GLASS TUBE (2.5A)	
F702	⚠1-532-286-00	(AEP,WG,UK,E)...FUSE, TIME-LAG (2.5A)	
F702	⚠1-532-744-11	(US,Canadian)...FUSE, GLASS TUBE (2.5A)	
S002	⚠1-570-307-11	(E)...SWITCH, VOLTAGE CHANGE	
T001	⚠1-449-981-11	(US.Canadian)...TRANSFORMER, POWER	
T001	⚠1-449-982-11	(AEP,WG).....TRANSFORMER, POWER	
T001	⚠1-449-983-11	(UK).....TRANSFORMER, POWER	
T001	⚠1-449-984-11	(E).....TRANSFORMER, POWER	

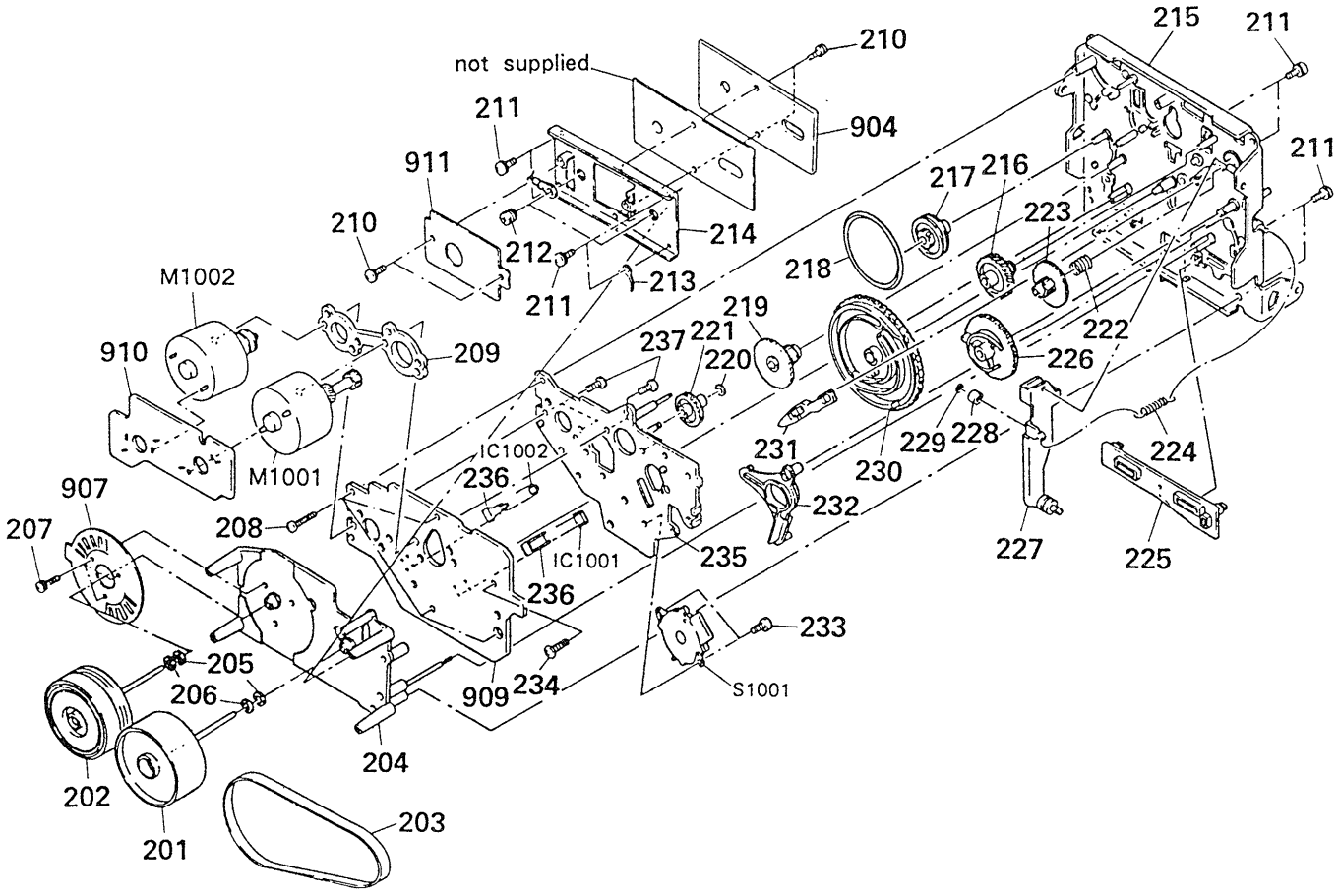
5-3. MECHANISM SECTION (1)
(TCM-200D1)



No.	Part No.	Description	Remarks
101	X-3356-612-1	HOLDER (B) ASSY, CASSETTE	
102	3-558-708-21	WASHER, STOPPER	
103	*3-356-717-01	LEVER (JOINT)	
104	3-356-626-01	SPRING, TENSION	
105	3-356-708-01	GEAR (SOFT EJECT)	
106	7-621-775-10	SCREW +B 2.6X4	
107	3-356-932-01	LEVER (LA)	
108	3-356-927-01	SPRING (LEFT), TORSION	
109	3-356-933-01	LEVER (LB)	
110	3-356-928-01	PLATE (A), ORNAMENTAL	
111	*3-356-929-01	ABSORBENT, VIBRATION	
112	3-356-931-01	LEVER (RB)	
113	3-356-926-01	SPRING (RIGHT), TORSION	
114	3-356-930-01	LEVER (RA)	
115	X-3356-613-1	PLATE ASSY, ORNAMENTAL	
116	7-685-133-19	SCREW +BTP 2.6X6 TYPE2 N-S	
117	7-628-253-00	SCREW +PS 2X4	
118	3-564-138-00	GUIDE (S), TAPE	
119	3-356-652-01	NUT (PINCH LEVER S)	
120	X-3356-621-1	LEVER (PINCH LEVER S) ASSY	
121	3-356-660-01	LEVER (PS)	
122	3-356-661-01	SPRING (PINCH LEVER S), TORSION	
123	3-356-657-01	SPRING (PS), COMPRESSION	
124	3-669-465-00	WASHER (1.5), STOPPER	
125	X-3356-641-1	LEVER (FR2) ASSY	
126	3-356-614-01	SLIDER (BRAKE)	
127	*X-3356-608-1	LEVER (LIFTER) ASSY	
128	3-356-601-11	SCREW, STEP	

No.	Part No.	Description	Remarks
129	X-3356-623-1	LEVER (BT) ASSY	
130	7-685-851-09	SCREW +BVTT 2X4 (S)	
131	3-712-786-01	DAMPER, OIL	
132	X-3356-629-1	GERA (S) ASSY	
133	X-3356-627-1	GEAR (T) ASSY	
134	3-356-710-01	SHAFT (LEFT) (CASSETTE HOLDER)	
135	3-356-658-01	SPRING (LIMITER H), TENSION	
136	3-356-659-01	SPRING (RPH), COMPRESSION	
137	*X-3356-617-1	SLIDER (HEAD PC BOADR) ASSY	
138	7-621-772-10	SCREW +B 2X4	
139	7-671-154-01	STENLESS BALL	
140	3-356-656-01	SPRING (HEAD PC BOARD), LEAF	
141	7-685-870-01	SCREW +BVTT 3X5 (S)	
142	X-3356-620-1	LEVER (PINCH LEVER T) ASSY	
143	7-621-772-70	SCREW +B 2X14	
144	3-318-433-01	SPRING	
145	*3-576-977-00	BRACKET, E. HEAD	
146	7-622-205-05	NUT M2 TYPE2	
147	X-3356-611-1	HOLDER (A) ASSY, CASSETTE	
149	3-356-624-01	SPRING, TENSION	
150	3-356-619-01	SPRING (B), TORSION	
151	3-356-672-01	SPRING (PINCH LEVER T), TORSION	
152	3-356-946-01	BUSHING	
153	3-669-596-00	WASHER (2.3), STOPPER	
154	3-564-121-00	SPRING, COMPRESSION	
908	*1-608-268-00	PC BOARD, ERASE HEAD	
HE501	1-543-358-11	HEAD, MAGNETIC (ERASE)	
HRP501	1-543-684-11	HEAD, MAGNETIC (REC/PB)	

5-4. MECHANISM SECTION (2)
(TCM-200D1)



No.	Part No.	Description	Remarks
201	X-3356-626-1	FLYWHEEL (S) ASSY	
202	X-3356-619-1	FLYWHEEL (DT) ASSY	
203	3-564-088-00	BELT (2), CAPSTAN	
204	*X-3356-614-1	DECK (D1) ASSY	
205	3-356-705-31	WASHER (CAPSTAN)	
206	3-356-705-21	WASHER (CAPSTAN)	
207	7-628-254-10	SCREW +PS 2.6X6	
208	3-355-801-01	SCREW (BTP 2X18)	
209	*3-356-628-01	SPACER (MOTOR)	
210	7-685-870-01	SCREW +BVTT 3X5 (S)	
211	7-682-648-09	SCREW +PS 3X8	
212	3-489-073-00	SCREW, THRUST	
213	*3-701-822-00	HOLDER, WIRE	
214	*X-3356-615-1	BRACKET(THRUST RETAINER D)ASSY	
215	X-3356-622-1	CHASSIS (C) ASSY, MECHANICAL	
216	3-356-703-01	GEAR (COMMUNICATION C)	
217	3-356-607-01	PULLEY (MODE)	
218	3-356-603-01	BELT (MODE)	
219	3-356-606-01	GEAR (MODE)	
220	3-669-465-00	WASHER (1.5), STOPPER	
221	3-356-702-01	GEAR (COMMUNICATION B)	
222	3-356-605-01	SPRING, COMPRESSION	
223	3-356-609-01	GEAR (LOADING)	

No.	Part No.	Description	Remarks
224	3-356-625-01	SPRING, TENSION	
225	3-356-653-01	SLIDER (PAUSE)	
226	3-356-616-01	GEAR (LOADING CAM)	
227	*X-3356-606-1	LEVER (LOADING) ASSY	
228	3-356-630-01	ROLLER (LOADING)	
229	3-558-708-11	WASHER, STOPPER	
230	3-356-654-01	GEAR (MODE CAM C)	
231	3-356-617-01	LEVER (SELECTION)	
232	3-356-613-01	LEVER (MODE)	
233	7-621-772-20	SCREW +B 2X5	
234	3-356-707-01	SCREW (+PTPWH 2X25)	
235	*X-3356-616-1	BRACKET (MOTOR D) ASSY	
236	3-356-631-01	HOLDER (SENSOR)	
237	7-621-773-95	SCREW +B 2.6X6	
904	A-2006-154-A	MOUNTED PCB, CAPSTAN C.O.C	
907	1-632-779-11	PC BOARD, FG	
909	*1-632-740-11	PC BOARD, MD	
910	*1-632-741-11	PC BOARD, REEL MOTOR	
911	*1-632-746-11	PC BOARD, COMPARATOR	
M1002	X-3356-604-1	MOTOR (ASSIST) ASSY	
M1001	X-3356-638-1	MOTOR (REEL R) ASSY	
S1001	1-466-238-11	ENCODER, ROTARY	

SECTION 6
ELECTRICAL PARTS LIST

NOTE:

- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
- Items marked "★" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- If there are two or more same circuits in a set such as a stereophonic machine, only typical circuit parts may be indicated and capacitors and resistors in other same circuits may be omitted.

CAPACITORS:
MF: μF, PF: μμF.

RESISTORS
- All resistors are in ohms.
- F: nonflammable

COILS
- MMH: mH, UH: μH

SEMICONDUCTORS
In each case, U: μ, for example:
UA...: μA..., UPA...: μPA..., UPC...: μPC, UPD...: μPD...

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

Les composants identifiés par une marque ⚠ sont critiques pour la sécurité.
Ne les remplacer que par une pièce portant le numéro spécifié.

Ref.No.	Part No.	Description			
901	A-2006-185-A	MOUNTED PCB, AUDIO			
902	A-2006-266-A	(E).....MOUNTED PCB, SYSTEM CONTROL			
	A-2006-287-A	(EXCEPT E)..MOUNTED PCB, SYSTEM CONTROL			
903	1-533-183-11	HOLDER, FUSE			
904	A-2006-154-A	MOUNTED PCB, CAPSTAN C.O.C			
907	1-632-779-11	PC BOARD, FG			
908	*1-608-268-00	PC BOARD, ERASE HEAD			
909	*1-632-740-11	PC BOARD, MD			
910	*1-632-741-11	PC BOARD, REEL MOTOR			
911	*1-632-746-11	PC BOARD, COMPARATOR			
912	⚠1-569-007-11	(E)...ADAPTOR, CONVERSION 2P			
C001	1-161-744-00	CERAMIC	0.01MF		400V
C101	1-136-252-00	FILM	0.0015MF	5%	100V
C102	1-130-893-00	FILM	0.027MF	3%	100V
C103	1-124-130-00	ELECT	100MF	20%	63V
C104	1-124-748-11	ELECT	22MF	20%	100V
C105	1-124-748-11	ELECT	22MF	20%	100V
C106	1-136-169-00	FILM	0.22MF	5%	50V
C107	1-136-230-00	FILM	0.0022MF	5%	100V
C108	1-136-230-00	FILM	0.0022MF	5%	100V
C109	1-136-230-00	FILM	0.0022MF	5%	100V
C110	1-130-475-00	MYLAR	0.0022MF	5%	50V
C111	1-130-475-00	MYLAR	0.0022MF	5%	50V
C112	1-130-478-00	MYLAR	0.0039MF	5%	50V
C113	1-136-173-00	FILM	0.47MF	5%	50V
C114	1-136-167-00	FILM	0.15MF	5%	50V
C115	1-136-155-00	FILM	0.015MF	5%	50V
C116	1-123-380-00	ELECT	1MF	20%	50V
C117	1-136-169-00	FILM	0.22MF	5%	50V
C118	1-136-163-00	FILM	0.068MF	5%	50V
C119	1-136-162-00	FILM	0.056MF	5%	50V
C120	1-123-380-00	ELECT	1MF	20%	50V
C121	1-130-480-00	MYLAR	0.0056MF	5%	50V
C122	1-136-153-00	FILM	0.01MF	5%	50V
C123	1-124-929-11	ELECT	22MF	20%	63V
C124	1-124-929-11	ELECT	22MF	20%	63V
C125	1-123-369-00	ELECT	4.7MF	20%	63V
C126	1-123-369-00	ELECT	4.7MF	20%	63V
C127	1-124-767-00	ELECT	2.2MF	20%	50V
C128	1-107-159-00	MICA	33PF	5%	500V
C129	1-107-159-00	MICA	33PF	5%	500V
C130	1-130-475-00	MYLAR	0.0022MF	5%	50V
C131	1-130-475-00	MYLAR	0.0022MF	5%	50V
C132	1-130-478-00	MYLAR	0.0039MF	5%	50V

Ref.No.	Part No.	Description			
C133	1-136-173-00	FILM	0.47MF	5%	50V
C134	1-136-167-00	FILM	0.15MF	5%	50V
C135	1-136-155-00	FILM	0.015MF	5%	50V
C136	1-123-380-00	ELECT	1MF	20%	50V
C137	1-136-169-00	FILM	0.22MF	5%	50V
C138	1-136-163-00	FILM	0.068MF	5%	50V
C139	1-136-162-00	FILM	0.056MF	5%	50V
C140	1-123-380-00	ELECT	1MF	20%	50V
C141	1-130-480-00	MYLAR	0.0056MF	5%	50V
C142	1-136-153-00	FILM	0.01MF	5%	50V
C143	1-124-929-11	ELECT	22MF	20%	63V
C144	1-124-929-11	ELECT	22MF	20%	63V
C145	1-136-250-11	FILM	0.001MF	5%	100V
C146	1-136-252-00	FILM	0.0015MF	5%	100V
C147	1-136-252-00	FILM	0.0015MF	5%	100V
C148	1-124-915-11	ELECT	10MF	20%	63V
C149	1-136-230-00	FILM	0.0022MF	5%	100V
C150	1-136-163-00	FILM	0.068MF	5%	50V
C151	1-130-892-00	FILM	0.015MF	5%	100V
C152	1-136-160-00	FILM	0.039MF	5%	50V
C153	1-130-892-00	FILM	0.015MF	5%	100V
C154	1-136-160-00	FILM	0.039MF	5%	50V
C155	1-136-594-11	FILM	0.018MF	5%	100V
C156	1-136-230-00	FILM	0.0022MF	5%	100V
C157	1-124-929-11	ELECT	22MF	20%	63V
C158	1-136-252-00	FILM	0.0015MF	5%	100V
C159	1-107-157-00	MICA	27PF	5%	500V
C160	1-136-230-00	FILM	0.0022MF	5%	100V
C161	1-124-767-00	ELECT	2.2MF	20%	50V
C162	1-124-925-11	ELECT	2.2MF	20%	50V
C163	1-124-927-11	ELECT	4.7MF	20%	50V
C164	1-136-165-00	FILM	0.1MF	5%	50V
C166	1-123-875-11	ELECT	10MF	20%	50V
C167	1-136-437-11	FILM	220PF	5%	630V
C168	1-136-153-00	FILM	0.01MF	5%	50V
C169	1-136-433-11	FILM	100PF	5%	630V
C170	1-136-435-11	FILM	150PF	5%	630V
C171	1-136-165-00	FILM	0.1MF	5%	50V
C172	1-136-157-00	FILM	0.022MF	5%	50V
C173	1-107-169-00	MICA	100PF	5%	500V
C174	1-123-369-00	ELECT	4.7MF	20%	63V
C175	1-123-369-00	ELECT	4.7MF	20%	63V
C176	1-136-252-00	FILM	0.0015MF	5%	100V
C201	1-136-252-00	FILM	0.0015MF	5%	100V
C202	1-130-893-00	FILM	0.027MF	3%	100V

Ref.No.	Part No.	Description			
C203	1-124-130-00	ELECT	100MF	20%	63V
C204	1-124-748-11	ELECT	22MF	20%	100V
C205	1-124-748-11	ELECT	22MF	20%	100V
C206	1-136-169-00	FILM	0.22MF	5%	50V
C207	1-136-230-00	FILM	0.0022MF	5%	100V
C208	1-136-230-00	FILM	0.0022MF	5%	100V
C209	1-136-230-00	FILM	0.0022MF	5%	100V
C210	1-130-475-00	MYLAR	0.0022MF	5%	50V
C211	1-130-475-00	MYLAR	0.0022MF	5%	50V
C212	1-130-478-00	MYLAR	0.0039MF	5%	50V
C213	1-136-173-00	FILM	0.47MF	5%	50V
C214	1-136-167-00	FILM	0.15MF	5%	50V
C215	1-136-155-00	FILM	0.015MF	5%	50V
C216	1-123-380-00	ELECT	1MF	20%	50V
C217	1-136-169-00	FILM	0.22MF	5%	50V
C218	1-136-163-00	FILM	0.068MF	5%	50V
C219	1-136-162-00	FILM	0.056MF	5%	50V
C220	1-123-380-00	ELECT	1MF	20%	50V
C221	1-130-480-00	MYLAR	0.0056MF	5%	50V
C222	1-136-153-00	FILM	0.01MF	5%	50V
C223	1-124-929-11	ELECT	22MF	20%	63V
C224	1-124-929-11	ELECT	22MF	20%	63V
C225	1-123-369-00	ELECT	4.7MF	20%	63V
C226	1-123-369-00	ELECT	4.7MF	20%	63V
C227	1-124-767-00	ELECT	2.2MF	20%	50V
C228	1-107-159-00	MICA	33PF	5%	500V
C229	1-107-159-00	MICA	33PF	5%	500V
C230	1-130-475-00	MYLAR	0.0022MF	5%	50V
C231	1-130-475-00	MYLAR	0.0022MF	5%	50V
C232	1-130-478-00	MYLAR	0.0039MF	5%	50V
C233	1-136-173-00	FILM	0.47MF	5%	50V
C234	1-136-167-00	FILM	0.15MF	5%	50V
C235	1-136-155-00	FILM	0.015MF	5%	50V
C236	1-123-380-00	ELECT	1MF	20%	50V
C237	1-136-169-00	FILM	0.22MF	5%	50V
C238	1-136-163-00	FILM	0.068MF	5%	50V
C239	1-136-162-00	FILM	0.056MF	5%	50V
C240	1-123-380-00	ELECT	1MF	20%	50V
C241	1-130-480-00	MYLAR	0.0056MF	5%	50V
C242	1-136-153-00	FILM	0.01MF	5%	50V
C243	1-124-929-11	ELECT	22MF	20%	63V
C244	1-124-929-11	ELECT	22MF	20%	63V
C245	1-136-250-11	FILM	0.001MF	5%	100V
C246	1-136-252-00	FILM	0.0015MF	5%	100V
C247	1-136-252-00	FILM	0.0015MF	5%	100V
C248	1-124-915-11	ELECT	10MF	20%	63V
C249	1-136-230-00	FILM	0.0022MF	5%	100V
C250	1-136-163-00	FILM	0.068MF	5%	50V
C251	1-130-892-00	FILM	0.015MF	5%	100V
C252	1-136-160-00	FILM	0.039MF	5%	50V
C253	1-130-892-00	FILM	0.015MF	5%	100V
C254	1-136-160-00	FILM	0.039MF	5%	50V
C255	1-136-594-11	FILM	0.018MF	5%	100V
C256	1-136-230-00	FILM	0.0022MF	5%	100V
C257	1-124-929-11	ELECT	22MF	20%	63V
C258	1-136-252-00	FILM	0.0015MF	5%	100V
C259	1-107-157-00	MICA	27PF	5%	500V
C260	1-136-230-00	FILM	0.0022MF	5%	100V
C261	1-124-767-00	ELECT	2.2MF	20%	50V
C262	1-124-925-11	ELECT	2.2MF	20%	50V
C263	1-124-927-11	ELECT	4.7MF	20%	50V
C264	1-124-767-00	ELECT	2.2MF	20%	50V
C265	1-161-375-00	CERAMIC	0.0022MF	20%	16V
C266	1-123-875-11	ELECT	10MF	20%	50V
C267	1-136-437-11	FILM	220PF	5%	630V
C268	1-136-153-00	FILM	0.01MF	5%	50V
C269	1-136-433-11	FILM	100PF	5%	630V
C270	1-136-435-11	FILM	150PF	5%	630V
C271	1-136-165-00	FILM	0.1MF	5%	50V
C272	1-136-157-00	FILM	0.022MF	5%	50V
C273	1-107-169-00	MICA	100PF	5%	500V
C274	1-123-369-00	ELECT	4.7MF	20%	63V
C275	1-123-369-00	ELECT	4.7MF	20%	63V
C276	1-136-252-00	FILM	0.0015MF	5%	100V
C501	1-123-377-00	ELECT	470MF	20%	63V
C502	1-123-377-00	ELECT	470MF	20%	63V
C503	1-123-333-00	ELECT	100MF	20%	25V
C504	1-123-333-00	ELECT	100MF	20%	25V
C505	1-107-159-00	MICA	33PF	5%	500V
C506	1-107-159-00	MICA	33PF	5%	500V
C507	1-124-922-11	ELECT	1000MF	20%	63V
C508	1-124-922-11	ELECT	1000MF	20%	63V
C509	1-123-875-11	ELECT	10MF	20%	50V
C510	1-124-927-11	ELECT	4.7MF	20%	50V
C511	1-123-333-00	ELECT	100MF	20%	16V
C512	1-123-333-00	ELECT	100MF	20%	16V
C513	1-124-477-11	ELECT	47MF	20%	25V
C514	1-124-477-11	ELECT	47MF	20%	25V
C515	1-124-927-11	ELECT	4.7MF	20%	50V
C516	1-126-233-11	ELECT	22MF	20%	50V
C517	1-123-875-11	ELECT	10MF	20%	50V
C518	1-126-233-11	ELECT	22MF	20%	50V
C519	1-123-875-11	ELECT	10MF	20%	50V
C520	1-124-902-00	ELECT	0.47MF	20%	50V
C521	1-124-915-11	ELECT	10MF	20%	63V
C522	1-124-915-11	ELECT	10MF	20%	63V
C523	1-107-046-00	MICA	4.7PF	0.5PF	500V
C524	1-130-478-00	MYLAR	0.0039MF	5%	50V
C527	1-123-369-00	ELECT	4.7MF	20%	63V
C528	1-123-369-00	ELECT	4.7MF	20%	63V
C529	1-130-474-00	MYLAR	0.0018MF	5%	50V
C530	1-130-474-00	MYLAR	0.0018MF	5%	50V
C531	1-136-157-00	FILM	0.022MF	5%	50V
C532	1-136-157-00	FILM	0.022MF	5%	50V
C533	1-124-477-11	ELECT	47MF	20%	25V
C534	1-124-477-11	ELECT	47MF	20%	25V
C535	1-162-294-31	CERAMIC	0.001MF	10%	50V
C536	1-162-294-31	CERAMIC	0.001MF	10%	50V
C537	1-162-291-31	CERAMIC	560PF	10%	50V
C538	1-162-291-31	CERAMIC	560PF	10%	50V
C539	1-131-368-00	TANTALUM	3.3MF	20%	16V
C540	1-136-802-11	FILM	0.015MF	5%	100V
C543	1-124-477-11	ELECT	47MF	20%	25V
C544	1-124-477-11	ELECT	47MF	20%	25V

Ref.No.	Part No.	Description			
C545	1-124-477-11	ELECT	47MF	20%	25V
C546	1-124-477-11	ELECT	47MF	20%	25V
C547	1-124-902-00	ELECT	0.47MF	20%	50V
C548	1-123-875-11	ELECT	10MF	20%	50V
C549	1-124-925-11	ELECT	2.2MF	20%	50V
C701	1-124-636-00	ELECT	3300MF	20%	25V
C702	1-123-875-11	ELECT	10MF	20%	50V
C703	1-124-911-11	ELECT	220MF	20%	50V
C704	1-124-911-11	ELECT	220MF	20%	50V
C705	1-126-982-11	ELECT	5600MF	20%	0
C706	1-126-982-11	ELECT	5600MF	20%	0
C707	1-124-443-00	ELECT	100MF	20%	10V
C708	1-136-177-00	FILM	1MF	5%	50V
C709	1-136-165-00	FILM	0.1MF	5%	50V
C711	1-124-636-00	ELECT	3300MF	20%	25V
C712	1-124-122-11	ELECT	100MF	20%	50V
C713	1-124-898-11	ELECT	4700MF	20%	16V
C714	1-123-875-11	ELECT	10MF	20%	50V
C715	1-124-791-11	ELECT	1MF	20%	50V
C716	1-124-443-00	ELECT	100MF	20%	10V
C717	1-123-875-11	ELECT	10MF	20%	50V
C718	1-124-472-11	ELECT	470MF	20%	10V
C721	1-124-472-11	ELECT	470MF	20%	10V
C722	1-124-791-11	ELECT	1MF	20%	50V
C723	1-124-122-11	ELECT	100MF	20%	50V
C724	1-124-443-00	ELECT	100MF	20%	10V
C725	1-124-472-11	ELECT	470MF	20%	10V
C727	1-124-477-11	ELECT	47MF	20%	25V
C728	1-124-477-11	ELECT	47MF	20%	25V
C729	1-126-177-11	ELECT	100MF	20%	6.3V
C730	1-162-211-31	CERAMIC	33PF	5%	50V
C731	1-164-159-11	CERAMIC	0.1MF		50V
C801	1-164-159-11	CERAMIC	0.1MF		50V
C802	1-123-875-11	ELECT	10MF	20%	50V
C803	1-164-159-11	CERAMIC	0.1MF		50V
C804	1-164-159-11	CERAMIC	0.1MF		50V
C805	1-162-294-31	CERAMIC	0.001MF	10%	50V
C806	1-162-294-31	CERAMIC	0.001MF	10%	50V
C807	1-136-159-00	FILM	0.033MF	5%	50V
C905	1-124-779-00	ELECT CHIP	10MF	20%	16V
C906	1-135-091-00	TANTAL. CHIP	1MF	10%	16V
C907	1-163-077-00	CERAMIC CHIP	0.1MF		50V
C908	1-163-077-00	CERAMIC CHIP	0.1MF		50V
C909	1-163-077-00	CERAMIC CHIP	0.1MF		50V
C910	1-163-205-00	CERAMIC CHIP	0.001MF	10%	50V
C911	1-124-779-00	ELECT CHIP	10MF	20%	16V
C951	1-136-157-00	FILM	0.022MF	5%	50V
C952	1-124-282-00	ELECT	22MF	20%	25V
C953	1-124-478-11	ELECT	100MF	20%	25V
C954	1-124-477-11	ELECT	47MF	20%	25V
C955	1-162-203-31	CERAMIC	15PF	5%	50V
C956	1-162-203-31	CERAMIC	15PF	5%	50V
C957	1-136-159-00	FILM	0.033MF	5%	50V
C1051	1-123-875-11	ELECT	10MF	20%	50V
C1052	1-123-875-11	ELECT	10MF	20%	50V
C1053	1-164-159-11	CERAMIC	0.1MF		50V

Ref.No.	Part No.	Description
CN001	*1-564-321-00	PIN, CONNECTOR 2P
CN002	*1-565-792-11	PIN, CONNECTOR 2P
CN003	*1-564-321-00	PIN, CONNECTOR 2P
CN004	*1-569-223-11	PIN, CONNECTOR 4P
CN005	*1-569-223-11	PIN, CONNECTOR 4P
CN006	*1-568-226-11	PIN, CONNECTOR 2P
CN701	*1-564-506-11	PLUG, CONNECTOR 3P
CN702	*1-564-104-00	PIN, CONNECTOR 3P
CN703	*1-564-506-11	PLUG, CONNECTOR 3P
CN704	*1-564-510-11	PLUG, CONNECTOR 7P
CN801	*1-564-341-11	PIN, CONNECTOR 7P
CN802	*1-564-340-71	PIN, CONNECTOR 6P
CN803	*1-564-666-11	PIN, CONNECTOR 10P
CN806	*1-564-338-00	PIN, CONNECTOR 4P
CN807	*1-564-340-00	PIN, CONNECTOR 6P
CN855	*1-564-342-61	PIN, CONNECTOR 8P
CN856	*1-506-503-11	PIN, CONNECTOR 9P
CN951	*1-564-718-11	PIN, CONNECTOR (SMALL TYPE) 2P
CN952	*1-564-518-11	PLUG, CONNECTOR 3P
CN1001	1-506-615-11	PIN, CONNECTOR 9P
CN1002	1-564-501-11	PIN, CONNECTOR 8P
CN1051	*1-564-499-11	PIN, CONNECTOR 6P
CN1052	*1-564-718-11	PIN, CONNECTOR (SMALL TYPE) 2P
CN1053	*1-564-718-11	PIN, CONNECTOR (SMALL TYPE) 2P
CND501	*1-564-337-71	PIN, CONNECTOR 3P
CND505	*1-564-336-61	PIN, CONNECTOR 2P
CND513	*1-564-338-61	PIN, CONNECTOR 4P
CND522	*1-564-340-71	PIN, CONNECTOR 6P
CND523	*1-564-338-00	PIN, CONNECTOR 4P
CND524	*1-564-339-00	PIN, CONNECTOR 5P
CND525	*1-564-340-61	PIN, CONNECTOR 6P
CND526	*1-564-340-81	PIN, CONNECTOR 6P
CND527	*1-564-341-11	PIN, CONNECTOR 7P
CND528	*1-564-338-71	PIN, CONNECTOR 4P
CND529	*1-564-339-71	PIN, CONNECTOR 5P
CND531	*1-564-339-61	PIN, CONNECTOR 5P
CND532	*1-564-339-81	PIN, CONNECTOR 5P
CND533	*1-564-340-00	PIN, CONNECTOR 6P
CNE507	*1-564-507-11	PLUG, CONNECTOR 4P
CNE508	*1-564-506-11	PLUG, CONNECTOR 3P
CNE514	*1-564-508-11	PLUG, CONNECTOR 5P
CNE516	*1-564-507-11	PLUG, CONNECTOR 4P
CNE520	*1-564-509-11	PLUG, CONNECTOR 6P
CNE521	*1-564-509-11	PLUG, CONNECTOR 6P
CNE534	*1-564-511-11	PLUG, CONNECTOR 8P
CNE535	*1-564-506-11	PLUG, CONNECTOR 3P
CNE536	*1-564-506-11	PLUG, CONNECTOR 3P
CNE537	*1-564-507-11	PLUG, CONNECTOR 4P
CNN502	*1-560-338-00	PIN, CONNECTOR 7P
CNN506	*1-560-062-00	PIN, CONNECTOR 4P
CNN509	*1-560-061-00	PIN, CONNECTOR 3P
CNN510	*1-560-061-00	PIN, CONNECTOR 3P
CNN511	*1-560-062-00	PIN, CONNECTOR 4P
CNN512	*1-560-061-00	PIN, CONNECTOR 3P
CNN515	*1-560-061-00	PIN, CONNECTOR 3P
CNN517	*1-560-062-00	PIN, CONNECTOR 4P
CNN518	*1-560-062-00	PIN, CONNECTOR 4P
CNN519	*1-560-062-00	PIN, CONNECTOR 4P

Ref.No.	Part No.	Description
CNP901⚠	1-559-297-31	(E).....CORD, POWER
CNP901⚠	1-559-479-11	(US,Canadian)...CORD, POWER
CNP901⚠	1-574-383-11	(AEP,WG).....CORD, POWER
CNP901⚠	1-574-384-11	(UK).....CORD, POWER
CNV503*	1-564-104-00	PIN, CONNECTOR 3P
CP501	1-466-252-11	OSCILLATION UNIT, BIAS
D101	8-719-107-94	DIODE 1SS202-1
D201	8-719-107-94	DIODE 1SS202-1
D503	8-719-910-65	DIODE HZ6B2L
D504	8-719-910-65	DIODE HZ6B2L
D505	8-719-001-57	DIODE UZL-11H3
D506	8-719-107-94	DIODE 1SS202-1
D507	8-719-107-94	DIODE 1SS202-1
D508	8-719-107-94	DIODE 1SS202-1
D509	8-719-107-94	DIODE 1SS202-1
D510	8-719-107-94	DIODE 1SS202-1
D511	8-719-107-94	DIODE 1SS202-1
D512	8-719-107-94	DIODE 1SS202-1
D513	8-719-107-94	DIODE 1SS202-1
D514	8-719-001-57	DIODE UZL-11H3
D515	8-719-001-57	DIODE UZL-11H3
D516	8-719-107-94	DIODE 1SS202-1
D517	8-719-107-94	DIODE 1SS202-1
D518	8-719-107-94	DIODE 1SS202-1
D519	8-719-107-94	DIODE 1SS202-1
D520	8-719-107-94	DIODE 1SS202-1
D521	8-719-933-54	DIODE UZS9A2L
D522	8-719-107-94	DIODE 1SS202-1
D523	8-719-107-94	DIODE 1SS202-1
D524	8-719-001-57	DIODE UZL-11H3
D525	8-719-107-94	DIODE 1SS202-1
D526	8-719-107-94	DIODE 1SS202-1
D527	8-719-114-29	DIODE RD5.1JS-B1
D528	8-719-114-29	DIODE RD5.1JS-B1
D529	8-719-001-57	DIODE UZL-11H3
D530	8-719-001-57	DIODE UZL-11H3
D531	8-719-114-29	DIODE RD5.1JS-B1
D532	8-719-933-54	DIODE UZS9A2L
D533	8-719-107-94	DIODE 1SS202-1
D534	8-719-107-94	DIODE 1SS202-1
D535	8-719-107-94	DIODE 1SS202-1
D536	8-719-114-29	DIODE RD5.1JS-B1
D537	8-719-107-94	DIODE 1SS202-1
D538	8-719-107-94	DIODE 1SS202-1
D539	8-719-107-94	DIODE 1SS202-1
D540	8-719-107-94	DIODE 1SS202-1
D541	8-719-114-29	DIODE RD5.1JS-B1
D542	8-719-107-94	DIODE 1SS202-1
D543	8-719-107-94	DIODE 1SS202-1
D544	8-719-107-94	DIODE 1SS202-1
D545	8-719-107-94	DIODE 1SS202-1
D546	8-719-000-84	DIODE UZL-7M1
D547	8-719-000-84	DIODE UZL-7M1
D548	8-719-107-94	DIODE 1SS202-1
D549	8-719-107-94	DIODE 1SS202-1
D550	8-719-301-52	LED SEL2810A-C
D551	8-719-107-94	DIODE 1SS202-1
D552	8-719-107-94	DIODE 1SS202-1
D553	8-719-107-94	DIODE 1SS202-1
D554	8-719-114-29	DIODE RD5.1JS-B1
D701	8-719-107-94	DIODE 1SS202-1
D702	8-719-107-94	DIODE 1SS202-1
D703	8-719-504-60	DIODE S4VB60
D704	8-719-200-77	DIODE 10E2N
D705	8-719-200-77	DIODE 10E2N
D706	8-719-230-02	DIODE 30DF2
D707	8-719-230-02	DIODE 30DF2
D708	8-719-230-02	DIODE 30DF2
D709	8-719-230-02	DIODE 30DF2
D710	8-719-933-41	DIODE HZS6C3L
D711	8-719-107-94	DIODE 1SS202-1
D712	8-719-200-77	DIODE 10E2N
D713	8-719-933-39	DIODE HZS6C1L
D714	8-719-933-39	DIODE HZS6C1L
D716	8-719-934-18	DIODE HZS27-2L
D717	8-719-114-29	DIODE RD5.1JS-B1
D801	8-719-312-76	LED SEL4814A-CD
D802	8-719-304-32	LED SEL4214S
D803	8-719-304-37	LED SEL4414E-C
D804	8-719-107-94	DIODE 1SS202-1
D806	8-719-107-94	DIODE 1SS202-1
D807	8-719-107-94	DIODE 1SS202-1
F701 ⚠	1-532-286-00	(AEP,WG,UK,E)...FUSE, TIME-LAG (2.5A)
F701 ⚠	1-532-744-11	(US,Canadian)...FUSE, GLASS TUBE (2.5A)
F702 ⚠	1-532-286-00	(AEP,WG,UK,E)...FUSE, TIME-LAG (2.5A)
F702 ⚠	1-532-744-11	(US,Canadian)...FUSE, GLASS TUBE (2.5A)
FLT501	1-519-497-11	INDICATOR TUBE, FLUORESCENT
FLT801	1-519-567-11	INDICATOR TUBE, FLUORESCENT
H901	8-719-403-79	HOLE ELEMENT OH009
H902	8-719-403-79	HOLE ELEMENT OH009
H903	8-719-403-79	HOLE ELEMENT OH009
HE501	1-543-358-11	HEAD, MAGNETIC (ERASE)
HRP501	1-543-684-11	HEAD, MAGNETIC (REC/PB)
IC101	8-759-900-72	IC NE5532P
IC102	8-759-900-72	IC NE5532P
IC201	8-759-900-72	IC NE5532P
IC202	8-759-900-72	IC NE5532P
IC501	8-759-900-72	IC NE5532P
IC503	8-752-018-80	IC CX20188
IC504	8-759-602-83	IC M5238P
IC505	8-752-018-80	IC CX20188
IC506	8-759-900-72	IC NE5532P
IC507	8-759-981-96	IC RC4560D
IC508	8-759-945-58	IC RC4558P
IC509	8-759-982-26	IC RC78L12A
IC510	8-759-982-48	IC RC79L12A
IC511	8-759-602-83	IC M5238P
IC512	8-759-961-38	IC BA6138
IC513	8-759-945-58	IC RC4558P
IC514	8-759-904-72	IC MSL9359RS
IC517	8-759-106-56	IC UPC1297CA

Note:
The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

Note:
Les composants identifiés par une marque ⚠ sont critiques pour la sécurité.
Ne les remplacer que par une pièce portant le numéro spécifié.

Ref.No.	Part No.	Description
IC519	8-759-240-50	IC UPD14050BC
IC520	8-759-140-11	IC MC14011BCP
IC701	8-759-604-29	IC M5F7805L
IC702	8-759-604-33	IC M5F7812L
IC801	8-759-634-78	IC M50964-222SP
IC802	8-759-240-69	IC TC14069UBP
IC803	8-759-973-95	IC BA6219B
IC804	8-759-973-95	IC BA6219B
IC805	8-749-920-83	IC GP1U52XB
IC806	8-759-905-48	IC MSL9512RS
IC902	8-752-017-40	IC CX20174
IC951	8-759-995-08	IC MC4558
IC952	8-759-201-58	IC TC9142P
IC1001	8-749-920-97	PHOTO REFLECTOR GP2S22B
IC1002	8-749-920-97	PHOTO REFLECTOR GP2S22B
J501	*1-568-250-21	JACK, PIN 2P (LINE OUT)
J502	1-569-140-11	JACK (LARGE TYPE)(PHONES)
J505	*1-569-186-11	JACK, PIN 4P (LINE IN/CD DIRECT IN)
JR901	1-216-296-00	METAL GLAZE 0 5% 1/8W
JR902	1-216-296-00	METAL GLAZE 0 5% 1/8W
JR903	1-216-296-00	METAL GLAZE 0 5% 1/8W
JR904	1-216-296-00	METAL GLAZE 0 5% 1/8W
JR905	1-216-296-00	METAL GLAZE 0 5% 1/8W
L103	1-408-920-00	INDUCTOR 4.7MMH
L104	1-408-918-11	INDUCTOR 3.3MMH
L105	1-408-916-11	INDUCTOR 2.2MMH
L106	1-408-925-11	INDUCTOR 12MMH
L107	1-408-916-11	INDUCTOR 2.2MMH
L203	1-408-920-00	INDUCTOR 4.7MMH
L204	1-408-918-11	INDUCTOR 3.3MMH
L205	1-408-916-11	INDUCTOR 2.2MMH
L206	1-408-925-11	INDUCTOR 12MMH
L207	1-408-916-11	INDUCTOR 2.2MMH
L501	1-410-525-11	INDUCTOR 220UH
L502	1-410-525-11	INDUCTOR 220UH
L503	1-410-525-11	INDUCTOR 220UH
LPF101	1-236-087-11	FILTER, LOW PASS
LPF201	1-236-087-11	FILTER, LOW PASS
M1001	X-3356-604-1	MOTOR (ASSIST) ASSY
M1002	X-3356-638-1	MOTOR (REEL R) ASSY
PL501	1-518-471-31	LAMP, PILOT
PL502	1-518-471-31	LAMP, PILOT
PS703	1-532-685-00	LINK, IC
PS704	1-532-685-00	LINK, IC
Q101	8-729-141-30	TRANSISTOR 2SC3623A-LK
Q102	8-729-102-14	TRANSISTOR 2SD1021
Q103	8-729-141-30	TRANSISTOR 2SC3623A-LK
Q104	8-729-141-30	TRANSISTOR 2SC3623A-LK
Q105	8-729-141-30	TRANSISTOR 2SC3623A-LK
Q106	8-729-141-30	TRANSISTOR 2SC3623A-LK
Q107	8-729-217-03	TRANSISTOR 2SK170
Q108	8-729-217-03	TRANSISTOR 2SK170
Q109	8-729-375-61	TRANSISTOR 2SD756
Q110	8-729-201-56	TRANSISTOR 2SK246-GR2
Q111	8-729-194-57	TRANSISTOR 2SC945
Q113	8-729-141-30	TRANSISTOR 2SC3623A-LK
Q118	8-729-102-14	TRANSISTOR 2SD1021
Q201	8-729-141-30	TRANSISTOR 2SC3623A-LK
Q202	8-729-102-14	TRANSISTOR 2SD1021
Q203	8-729-141-30	TRANSISTOR 2SC3623A-LK
Q204	8-729-141-30	TRANSISTOR 2SC3623A-LK
Q205	8-729-141-30	TRANSISTOR 2SC3623A-LK
Q206	8-729-141-30	TRANSISTOR 2SC3623A-LK
Q207	8-729-217-03	TRANSISTOR 2SK170
Q208	8-729-217-03	TRANSISTOR 2SK170
Q209	8-729-375-61	TRANSISTOR 2SD756
Q210	8-729-201-56	TRANSISTOR 2SK246-GR2
Q211	8-729-194-57	TRANSISTOR 2SC945
Q213	8-729-141-30	TRANSISTOR 2SC3623A-LK
Q218	8-729-102-14	TRANSISTOR 2SD1021
Q501	8-729-167-62	TRANSISTOR 2SC2676
Q502	8-729-113-82	TRANSISTOR 2SA1138
Q503	8-729-167-62	TRANSISTOR 2SC2676
Q504	8-729-113-82	TRANSISTOR 2SA1138
Q505	8-729-107-53	TRANSISTOR 2SC2275A
Q506	8-729-190-53	TRANSISTOR 2SA985A
Q507	8-729-900-89	TRANSISTOR DTC144ES
Q508	8-729-900-63	TRANSISTOR DTA124ES
Q509	8-729-900-89	TRANSISTOR DTC144ES
Q510	8-729-230-45	TRANSISTOR 2SC2458-YGR
Q511	8-729-900-89	TRANSISTOR DTC144ES
Q512	8-729-900-36	TRANSISTOR DTC124ES
Q513	8-729-900-36	TRANSISTOR DTC124ES
Q514	8-729-230-45	TRANSISTOR 2SC2458-YGR
Q515	8-729-900-61	TRANSISTOR DTA114ES
Q516	8-729-141-30	TRANSISTOR 2SC3623A-LK
Q517	8-729-141-30	TRANSISTOR 2SC3623A-LK
Q519	8-729-900-63	TRANSISTOR DTA124ES
Q521	8-729-281-53	TRANSISTOR 2SC1815-GR
Q522	8-729-201-53	TRANSISTOR 2SA1015-GR
Q523	8-729-900-63	TRANSISTOR DTA124ES
Q524	8-729-201-56	TRANSISTOR 2SK246-GR2
Q525	8-729-201-56	TRANSISTOR 2SK246-GR2
Q526	8-729-900-89	TRANSISTOR DTC144ES
Q527	8-729-900-89	TRANSISTOR DTC144ES
Q528	8-729-900-36	TRANSISTOR DTC124ES
Q529	8-729-119-76	TRANSISTOR 2SA1175-HFE
Q530	8-729-119-76	TRANSISTOR 2SA1175-HFE
Q531	8-729-900-63	TRANSISTOR DTA124ES
Q532	8-729-281-53	TRANSISTOR 2SC1815-GR
Q533	8-729-900-63	TRANSISTOR DTA124ES
Q535	8-729-900-36	TRANSISTOR DTC124ES
Q536	8-729-900-36	TRANSISTOR DTC124ES
Q537	8-729-900-36	TRANSISTOR DTC124ES
Q539	8-729-900-36	TRANSISTOR DTC124ES
Q540	8-729-900-65	TRANSISTOR DTA144ES
Q541	8-729-900-65	TRANSISTOR DTA144ES
Q542	8-729-900-65	TRANSISTOR DTA144ES
Q543	8-729-900-65	TRANSISTOR DTA144ES
Q544	8-729-900-61	TRANSISTOR DTA114ES
Q545	8-729-900-61	TRANSISTOR DTA114ES
Q546	8-729-900-89	TRANSISTOR DTC144ES
Q547	8-729-900-89	TRANSISTOR DTC144ES
Q548	8-729-900-89	TRANSISTOR DTC144ES
Q549	8-729-119-76	TRANSISTOR 2SA1175-HFE
Q551	8-729-119-76	TRANSISTOR 2SA1175-HFE

Ref.No.	Part No.	Description
Q552	8-729-900-80	TRANSISTOR DTC114ES
Q553	8-729-900-80	TRANSISTOR DTC114ES
Q554	8-729-900-80	TRANSISTOR DTC114ES
Q555	8-729-230-45	TRANSISTOR 2SC2458-YGR
Q556	8-729-230-45	TRANSISTOR 2SC2458-YGR
Q557	8-729-230-45	TRANSISTOR 2SC2458-YGR
Q701	8-729-141-03	TRANSISTOR 2SA733-QP
Q702	8-729-920-97	TRANSISTOR 2SB1187-EF
Q703	8-729-194-57	TRANSISTOR 2SC945-P
Q704	8-729-194-57	TRANSISTOR 2SC945-P
Q707	8-729-920-98	TRANSISTOR 2SD1761-EF
Q708	8-729-141-03	TRANSISTOR 2SA733-QP
Q709	8-729-141-03	TRANSISTOR 2SA733-QP
Q801	8-729-900-61	TRANSISTOR DTA114ES
Q802	8-729-900-61	TRANSISTOR DTA114ES
Q803	8-729-900-61	TRANSISTOR DTA114ES
Q804	8-729-900-61	TRANSISTOR DTA114ES
Q805	8-729-194-57	TRANSISTOR 2SC945-P
Q806	8-729-141-03	TRANSISTOR 2SA733-QP
Q807	8-729-194-57	TRANSISTOR 2SC945-P
Q808	8-729-194-57	TRANSISTOR 2SC945-P
Q809	8-729-900-65	TRANSISTOR DTA144ES
Q810	8-729-900-65	TRANSISTOR DTA144ES
Q811	8-729-900-65	TRANSISTOR DTA144ES
Q812	8-729-900-65	TRANSISTOR DTA144ES
Q813	8-729-900-65	TRANSISTOR DTA144ES
R101	1-249-844-11	CARBON 56K 5% 1/2W
R102	1-247-128-00	CARBON 750 5% 1/4W
R103	1-247-128-00	CARBON 750 5% 1/4W
R104	1-247-700-11	CARBON 100 5% 1/4W
R105	1-247-708-11	CARBON 470 5% 1/4W
R106	1-249-518-11	CARBON 39 5% 1/4W
R107	1-249-429-11	CARBON 10K 5% 1/4W
R108	1-247-721-11	CARBON 4.7K 5% 1/4W
R109	1-247-704-11	CARBON 220 5% 1/4W
R110	1-249-723-11	CARBON 120K 5% 1/2W
R111	1-247-749-11	CARBON 560 5% 1/2W
R112	1-247-764-11	CARBON 10K 5% 1/2W
R113	1-247-146-00	CARBON 4.3K 5% 1/4W
R114	1-247-142-00	CARBON 3K 5% 1/4W
R115	1-246-545-00	CARBON 1M 5% 1/4W
R116	1-247-710-11	CARBON 560 5% 1/4W
R117	1-249-462-11	CARBON 22K 5% 1/4W
R118	1-247-152-00	CARBON 7.5K 5% 1/4W
R119	1-247-711-11	CARBON 680 5% 1/4W
R120	1-247-154-00	CARBON 9.1K 5% 1/4W
R121	1-249-465-11	CARBON 47K 5% 1/4W
R122	1-249-586-11	CARBON 27K 5% 1/4W
R123	1-247-152-00	CARBON 8.2K 5% 1/4W
R124	1-249-469-11	CARBON 100K 5% 1/4W
R125	1-247-723-11	CARBON 6.8K 5% 1/4W
R126	1-247-720-11	CARBON 3.9K 5% 1/4W
R127	1-247-719-11	CARBON 3.3K 5% 1/4W

Ref.No.	Part No.	Description
R128	1-247-152-00	CARBON 7.5K 5% 1/4W
R129	1-249-469-11	CARBON 100K 5% 1/4W
R130	1-247-747-11	CARBON 470 5% 1/2W
R131	1-247-764-11	CARBON 10K 5% 1/2W
R132	1-247-146-00	CARBON 4.3K 5% 1/4W
R133	1-247-142-00	CARBON 3K 5% 1/4W
R134	1-246-545-00	CARBON 1M 5% 1/4W
R135	1-247-710-11	CARBON 560 5% 1/4W
R136	1-249-462-11	CARBON 22K 5% 1/4W
R137	1-247-152-00	CARBON 7.5K 5% 1/4W
R138	1-247-711-11	CARBON 680 5% 1/4W
R139	1-247-154-00	CARBON 9.1K 5% 1/4W
R140	1-249-465-11	CARBON 47K 5% 1/4W
R141	1-247-721-11	CARBON 4.7K 5% 1/4W
R142	1-247-152-00	CARBON 8.2K 5% 1/4W
R143	1-247-725-11	CARBON 10K 5% 1/4W
R144	1-249-462-11	CARBON 22K 5% 1/4W
R145	1-247-721-11	CARBON 4.7K 5% 1/4W
R146	1-246-545-00	CARBON 1M 5% 1/4W
R147	1-247-719-11	CARBON 3.3K 5% 1/4W
R148	1-247-723-11	CARBON 6.8K 5% 1/4W
R149	1-249-425-11	CARBON 4.7K 5% 1/4W
R150	1-249-590-11	CARBON 39K 5% 1/4W
R151	1-249-429-11	CARBON 10K 5% 1/4W
R152	1-249-465-11	CARBON 47K 5% 1/4W
R153	1-247-716-11	CARBON 1.8K 5% 1/4W
R154	1-249-429-11	CARBON 10K 5% 1/4W
R155	1-249-598-11	CARBON 82K 5% 1/4W
R156	1-249-467-11	CARBON 43K 5% 1/4W
R157	1-247-701-11	CARBON 120 5% 1/4W
R158	1-249-459-11	CARBON 12K 5% 1/4W
R159	1-249-429-11	CARBON 10K 5% 1/4W
R160	1-247-701-11	CARBON 120 5% 1/4W
R161	1-247-142-00	CARBON 3K 5% 1/4W
R162	1-247-721-11	CARBON 4.7K 5% 1/4W
R163	1-249-429-11	CARBON 10K 5% 1/4W
R164	1-247-700-11	CARBON 100 5% 1/4W
R165	1-247-718-11	CARBON 2.7K 5% 1/4W
R166	1-247-719-11	CARBON 3.3K 5% 1/4W
R167	1-249-429-11	CARBON 10K 5% 1/4W
R168	1-247-718-11	CARBON 2.7K 5% 1/4W
R169	1-247-714-11	CARBON 1.2K 5% 1/4W
R170	1-247-714-11	CARBON 1.2K 5% 1/4W
R171	1-249-465-11	CARBON 47K 5% 1/4W
R172	1-247-721-11	CARBON 4.7K 5% 1/4W
R173	1-249-461-11	CARBON 18K 5% 1/4W
R174	1-249-469-11	CARBON 100K 5% 1/4W
R175	1-247-704-11	CARBON 220 5% 1/4W
R176	1-247-710-11	CARBON 560 5% 1/4W
R177	1-249-421-11	CARBON 2.2K 5% 1/4W
R178	1-249-397-11	CARBON 22 5% 1/4W
R179	1-247-883-00	CARBON 150K 5% 1/4W
R180	1-249-429-11	CARBON 10K 5% 1/4W
R181	1-249-417-11	CARBON 1K 5% 1/4W
R182	1-249-437-11	CARBON 47K 5% 1/4W
R183	1-249-417-11	CARBON 1K 5% 1/4W
R184	1-249-429-11	CARBON 10K 5% 1/4W

Ref.No.	Part No.	Description			
R185	1-249-441-11	CARBON	100K	5%	1/4W
R187	1-249-462-11	CARBON	22K	5%	1/4W
R188	1-247-740-11	CARBON	120	5%	1/2W
R189	1-247-255-00	CARBON	4.3K	5%	1/2W
R190	1-249-658-11	CARBON	240	5%	1/2W
R191	1-214-851-00	CARBON	300	5%	1/2W
R192	1-247-764-11	CARBON	10K	5%	1/2W
R193	1-247-720-11	CARBON	3.9K	5%	1/4W
R194	1-247-718-11	CARBON	2.7K	5%	1/4W
R195	1-247-718-11	CARBON	2.7K	5%	1/4W
R196	1-247-721-11	CARBON	4.7K	5%	1/4W
R197	1-247-146-00	CARBON	4.3K	5%	1/4W
R198	1-247-718-11	CARBON	2.7K	5%	1/4W
R199	1-247-718-11	CARBON	2.7K	5%	1/4W
R201	1-249-844-11	CARBON	56K	5%	1/2W
R202	1-247-128-00	CARBON	750	5%	1/4W
R203	1-247-128-00	CARBON	750	5%	1/4W
R204	1-247-700-11	CARBON	100	5%	1/4W
R205	1-247-708-11	CARBON	470	5%	1/4W
R206	1-249-518-11	CARBON	39	5%	1/4W
R207	1-249-429-11	CARBON	10K	5%	1/4W
R208	1-247-721-11	CARBON	4.7K	5%	1/4W
R209	1-247-704-11	CARBON	220	5%	1/4W
R210	1-249-723-11	CARBON	120K	5%	1/2W
R211	1-247-749-11	CARBON	560	5%	1/2W
R212	1-247-764-11	CARBON	10K	5%	1/2W
R213	1-247-146-00	CARBON	4.3K	5%	1/4W
R214	1-247-142-00	CARBON	3K	5%	1/4W
R215	1-246-545-00	CARBON	1M	5%	1/4W
R216	1-247-710-11	CARBON	560	5%	1/4W
R217	1-249-462-11	CARBON	22K	5%	1/4W
R218	1-247-152-00	CARBON	7.5K	5%	1/4W
R219	1-247-711-11	CARBON	680	5%	1/4W
R220	1-247-154-00	CARBON	9.1K	5%	1/4W
R221	1-249-465-11	CARBON	47K	5%	1/4W
R222	1-249-586-11	CARBON	27K	5%	1/4W
R223	1-247-152-00	CARBON	8.2K	5%	1/4W
R224	1-249-469-11	CARBON	100K	5%	1/4W
R225	1-247-723-11	CARBON	6.8K	5%	1/4W
R226	1-247-720-11	CARBON	3.9K	5%	1/4W
R227	1-247-719-11	CARBON	3.3K	5%	1/4W
R228	1-247-152-00	CARBON	7.5K	5%	1/4W
R229	1-249-469-11	CARBON	100K	5%	1/4W
R230	1-247-747-11	CARBON	470	5%	1/2W
R231	1-247-764-11	CARBON	10K	5%	1/2W
R232	1-247-146-00	CARBON	4.3K	5%	1/4W
R233	1-247-142-00	CARBON	3K	5%	1/4W
R234	1-246-545-00	CARBON	1M	5%	1/4W
R235	1-247-710-11	CARBON	560	5%	1/4W
R236	1-249-462-11	CARBON	22K	5%	1/4W
R237	1-247-152-00	CARBON	7.5K	5%	1/4W
R238	1-247-711-11	CARBON	680	5%	1/4W
R239	1-247-154-00	CARBON	9.1K	5%	1/4W
R240	1-249-465-11	CARBON	47K	5%	1/4W
R241	1-247-721-11	CARBON	4.7K	5%	1/4W
R242	1-247-152-00	CARBON	8.2K	5%	1/4W
R243	1-247-725-11	CARBON	10K	5%	1/4W

Ref.No.	Part No.	Description			
R244	1-249-462-11	CARBON	22K	5%	1/4W
R245	1-247-721-11	CARBON	4.7K	5%	1/4W
R246	1-246-545-00	CARBON	1M	5%	1/4W
R247	1-247-719-11	CARBON	3.3K	5%	1/4W
R248	1-247-723-11	CARBON	6.8K	5%	1/4W
R249	1-249-425-11	CARBON	4.7K	5%	1/4W
R250	1-249-590-11	CARBON	39K	5%	1/4W
R251	1-249-429-11	CARBON	10K	5%	1/4W
R252	1-249-465-11	CARBON	47K	5%	1/4W
R253	1-247-716-11	CARBON	1.8K	5%	1/4W
R254	1-249-429-11	CARBON	10K	5%	1/4W
R255	1-249-598-11	CARBON	82K	5%	1/4W
R256	1-259-467-11	CARBON	43K	5%	1/4W
R257	1-247-701-11	CARBON	120	5%	1/4W
R258	1-249-459-11	CARBON	12K	5%	1/4W
R259	1-249-429-11	CARBON	10K	5%	1/4W
R260	1-247-701-11	CARBON	120	5%	1/4W
R261	1-247-142-00	CARBON	3K	5%	1/4W
R262	1-247-721-11	CARBON	4.7K	5%	1/4W
R263	1-249-429-11	CARBON	10K	5%	1/4W
R264	1-247-700-11	CARBON	100	5%	1/4W
R265	1-247-718-11	CARBON	2.7K	5%	1/4W
R266	1-247-719-11	CARBON	3.3K	5%	1/4W
R267	1-249-429-11	CARBON	10K	5%	1/4W
R268	1-247-718-11	CARBON	2.7K	5%	1/4W
R269	1-247-714-11	CARBON	1.2K	5%	1/4W
R270	1-247-714-11	CARBON	1.2K	5%	1/4W
R271	1-249-465-11	CARBON	47K	5%	1/4W
R272	1-247-721-11	CARBON	4.7K	5%	1/4W
R273	1-249-461-11	CARBON	18K	5%	1/4W
R274	1-249-469-11	CARBON	100K	5%	1/4W
R275	1-247-704-11	CARBON	220	5%	1/4W
R276	1-247-710-11	CARBON	560	5%	1/4W
R277	1-249-421-11	CARBON	2.2K	5%	1/4W
R278	1-249-397-11	CARBON	22	5%	1/4W
R279	1-247-883-00	CARBON	150K	5%	1/4W
R280	1-249-429-11	CARBON	10K	5%	1/4W
R281	1-249-417-11	CARBON	1K	5%	1/4W
R282	1-249-437-11	CARBON	47K	5%	1/4W
R283	1-249-417-11	CARBON	1K	5%	1/4W
R284	1-249-429-11	CARBON	10K	5%	1/4W
R285	1-249-441-11	CARBON	100K	5%	1/4W
R287	1-249-462-11	CARBON	22K	5%	1/4W
R288	1-247-740-11	CARBON	120	5%	1/2W
R289	1-247-255-00	CARBON	4.3K	5%	1/2W
R290	1-249-658-11	CARBON	240	5%	1/2W
R291	1-214-851-00	CARBON	300	5%	1/2W
R292	1-247-764-11	CARBON	10K	5%	1/2W
R293	1-247-720-11	CARBON	3.9K	5%	1/4W
R294	1-247-718-11	CARBON	2.7K	5%	1/4W
R295	1-247-718-11	CARBON	2.7K	5%	1/4W
R296	1-247-721-11	CARBON	4.7K	5%	1/4W
R297	1-247-146-00	CARBON	4.3K	5%	1/4W
R298	1-247-718-11	CARBON	2.7K	5%	1/4W
R299	1-247-718-11	CARBON	2.7K	5%	1/4W
R301	1-247-719-11	CARBON	3.3K	5%	1/4W
R302	1-249-926-11	CARBON	1.3K	5%	1/4W

Ref.No.	Part No.	Description			
R303	1-247-891-00	CARBON	330K	5%	1/4W
R304	1-249-604-11	CARBON	150K	5%	1/4W
R307	1-247-883-00	CARBON	150K	5%	1/4W
R308	1-249-426-11	CARBON	5.6K	5%	1/4W
R312	1-247-725-11	CARBON	10K	5%	1/4W
R315	1-246-545-00	CARBON	1M	5%	1/4W
R316	1-246-545-00	CARBON	1M	5%	1/4W
R317	1-247-842-11	CARBON	3K	5%	1/4W
R318	1-249-425-11	CARBON	4.7K	5%	1/4W
R401	1-247-719-11	CARBON	3.3K	5%	1/4W
R402	1-249-926-11	CARBON	1.3K	5%	1/4W
R403	1-247-891-00	CARBON	330K	5%	1/4W
R404	1-249-604-11	CARBON	150K	5%	1/4W
R407	1-247-883-00	CARBON	150K	5%	1/4W
R408	1-249-426-11	CARBON	5.6K	5%	1/4W
R412	1-247-725-11	CARBON	10K	5%	1/4W
R415	1-246-545-00	CARBON	1M	5%	1/4W
R416	1-246-545-00	CARBON	1M	5%	1/4W
R417	1-247-842-11	CARBON	3K	5%	1/4W
R418	1-249-425-11	CARBON	4.7K	5%	1/4W
R501	1-249-466-11	CARBON	56K	5%	1/4W
R502	1-249-466-11	CARBON	56K	5%	1/4W
R503	1-247-719-11	CARBON	3.3K	5%	1/4W
R504	1-247-719-11	CARBON	3.3K	5%	1/4W
R505	1-247-749-11	CARBON	560	5%	1/2W
R506	1-247-749-11	CARBON	560	5%	1/2W
R507	1-249-673-11	CARBON	1K	5%	1/2W
R508	1-249-673-11	CARBON	1K	5%	1/2W
R509	1-249-429-11	CARBON	10K	5%	1/4W
R510	1-215-472-00	METAL	130K	1%	1/6W
R511	1-249-433-11	CARBON	22K	5%	1/4W
R512	1-249-437-11	CARBON	47K	5%	1/4W
R513	1-249-425-11	CARBON	4.7K	5%	1/4W
R514	1-249-434-11	CARBON	27K	5%	1/4W
R515	1-249-429-11	CARBON	10K	5%	1/4W
R516	1-249-433-11	CARBON	22K	5%	1/4W
R517	1-249-437-11	CARBON	47K	5%	1/4W
R518	1-249-429-11	CARBON	10K	5%	1/4W
R519	1-215-472-00	METAL	130K	1%	1/6W
R520	1-247-700-11	CARBON	100	5%	1/4W
R521	1-247-700-11	CARBON	100	5%	1/4W
R522	1-249-433-11	CARBON	22K	5%	1/4W
R523	1-249-417-11	CARBON	1K	5%	1/4W
R524	1-249-435-11	CARBON	33K	5%	1/4W
R525	1-249-438-11	CARBON	56K	5%	1/4W
R526	1-249-429-11	CARBON	10K	5%	1/4W
R527	1-249-429-11	CARBON	10K	5%	1/4W
R528	1-249-437-11	CARBON	47K	5%	1/4W
R529	1-249-421-11	CARBON	2.2K	5%	1/4W
R530	1-249-438-11	CARBON	56K	5%	1/4W
R531	1-249-433-11	CARBON	22K	5%	1/4W
R533	1-249-433-11	CARBON	22K	5%	1/4W
R536	1-249-433-11	CARBON	22K	5%	1/4W
R537	1-247-878-00	CARBON	91K	5%	1/4W
R538	1-249-434-11	CARBON	27K	5%	1/4W
R539	1-249-433-11	CARBON	22K	5%	1/4W
R540	1-249-438-11	CARBON	56K	5%	1/4W

Ref.No.	Part No.	Description			
R541	1-249-429-11	CARBON	10K	5%	1/4W
R542	1-249-433-11	CARBON	22K	5%	1/4W
R543	1-249-437-11	CARBON	47K	5%	1/4W
R544	1-247-818-11	CARBON	300	5%	1/4W
R545	1-247-818-11	CARBON	300	5%	1/4W
R546	1-249-433-11	CARBON	22K	5%	1/4W
R547	1-249-425-11	CARBON	4.7K	5%	1/4W
R548	1-249-433-11	CARBON	22K	5%	1/4W
R550	1-249-429-11	CARBON	10K	5%	1/4W
R551	1-249-437-11	CARBON	47K	5%	1/4W
R552	1-249-428-11	CARBON	8.2K	5%	1/4W
R553	1-249-397-11	CARBON	22	5%	1/4W
R554	1-247-856-00	CARBON	11K	5%	1/4W
R555	1-247-856-00	CARBON	11K	5%	1/4W
R556	1-249-407-11	CARBON	150	5%	1/4W
R557	1-249-428-11	CARBON	8.2K	5%	1/4W
R558	1-249-397-11	CARBON	22	5%	1/4W
R559	1-249-432-11	CARBON	18K	5%	1/4W
R560	1-249-432-11	CARBON	18K	5%	1/4W
R561	1-249-407-11	CARBON	150	5%	1/4W
R562	1-247-887-00	CARBON	220K	5%	1/4W
R563	1-247-887-00	CARBON	220K	5%	1/4W
R564	1-249-433-11	CARBON	22K	5%	1/4W
R565	1-249-433-11	CARBON	22K	5%	1/4W
R566	1-249-441-11	CARBON	100K	5%	1/4W
R567	1-249-441-11	CARBON	100K	5%	1/4W
R568	1-249-441-11	CARBON	100K	5%	1/4W
R569	1-249-441-11	CARBON	100K	5%	1/4W
R570	1-249-441-11	CARBON	100K	5%	1/4W
R571	1-249-441-11	CARBON	100K	5%	1/4W
R572	1-249-441-11	CARBON	100K	5%	1/4W
R573	1-249-441-11	CARBON	100K	5%	1/4W
R574	1-249-441-11	CARBON	100K	5%	1/4W
R575	1-249-441-11	CARBON	100K	5%	1/4W
R576	1-249-441-11	CARBON	100K	5%	1/4W
R577	1-249-441-11	CARBON	100K	5%	1/4W
R578	1-249-441-11	CARBON	100K	5%	1/4W
R579	1-249-441-11	CARBON	100K	5%	1/4W
R580	1-249-410-11	CARBON	270	5%	1/4W
R581	1-249-410-11	CARBON	270	5%	1/4W
R582	1-247-887-00	CARBON	220K	5%	1/4W
R583	1-249-432-11	CARBON	18K	5%	1/4W
R584	1-249-429-11	CARBON	10K	5%	1/4W
R585	1-249-429-11	CARBON	10K	5%	1/4W
R586	1-249-408-11	CARBON	180	5%	1/4W
R587	1-249-421-11	CARBON	2.2K	5%	1/4W
R591	1-249-417-11	CARBON	1K	5%	1/4W
R592	1-247-862-11	CARBON	20K	5%	1/4W
R593	1-247-860-11	CARBON	16K	5%	1/4W
R594	1-249-405-11	CARBON	100	5%	1/4W
R595	1-249-405-11	CARBON	100	5%	1/4W
R596	1-249-405-11	CARBON	100	5%	1/4W
R597	1-249-405-11	CARBON	100	5%	1/4W
R598	1-249-405-11	CARBON	100	5%	1/4W
R599	1-249-405-11	CARBON	100	5%	1/4W
R600	1-249-405-11	CARBON	100	5%	1/4W
R601	1-249-405-11	CARBON	100	5%	1/4W

Ref.No.	Part No.	Description				
R602	1-249-405-11	CARBON	100	5%	1/4W	
R603	1-249-405-11	CARBON	100	5%	1/4W	
R604	1-249-405-11	CARBON	100	5%	1/4W	
R605	1-249-429-11	CARBON	10K	5%	1/4W	
R606	1-249-441-11	CARBON	100K	5%	1/4W	
R607	1-249-410-11	CARBON	270	5%	1/4W	
R608	1-249-410-11	CARBON	270	5%	1/4W	
R609	1-249-405-11	CARBON	100	5%	1/4W	
R611	1-249-547-11	CARBON	620	5%	1/4W	
R613	1-249-547-11	CARBON	620	5%	1/4W	
R614	1-249-417-11	CARBON	1K	5%	1/4W	
R615	1-249-414-11	CARBON	560	5%	1/4W	
R616	1-249-426-11	CARBON	5.6K	5%	1/4W	
R617	1-249-433-11	CARBON	22K	5%	1/4W	
R618	1-247-842-11	CARBON	3K	5%	1/4W	
R619	1-247-812-11	CARBON	160	5%	1/4W	
R620	1-249-414-11	CARBON	560	5%	1/4W	
R621	1-249-417-11	CARBON	1K	5%	1/4W	
R622	1-249-429-11	CARBON	10K	5%	1/4W	
R623	1-249-429-11	CARBON	10K	5%	1/4W	
R624	1-249-417-11	CARBON	1K	5%	1/4W	
R625	1-249-433-11	CARBON	22K	5%	1/4W	
R626	1-249-424-11	CARBON	3.9K	5%	1/4W	
R627	1-249-417-11	CARBON	1K	5%	1/4W	
R628	1-249-429-11	CARBON	10K	5%	1/4W	
R629	1-249-429-11	CARBON	10K	5%	1/4W	
R630	1-249-429-11	CARBON	10K	5%	1/4W	
R701	1-247-752-11	CARBON	1K	5%	1/2W	
R702	⚠1-212-863-00	FUSIBLE	18	5%	1/4W	F
R703	1-249-397-11	CARBON	22	5%	1/4W	
R704	1-249-397-11	CARBON	22	5%	1/4W	
R705	1-249-425-11	CARBON	4.7K	5%	1/4W	
R706	1-249-437-11	CARBON	47K	5%	1/4W	
R707	1-249-425-11	CARBON	4.7K	5%	1/4W	
R708	1-249-437-11	CARBON	47K	5%	1/4W	
R709	1-249-422-11	CARBON	2.7K	5%	1/4W	
R710	1-249-427-11	CARBON	6.8K	5%	1/4W	
R711	1-249-412-11	CARBON	390	5%	1/4W	
R712	1-249-426-11	CARBON	5.6K	5%	1/4W	
R713	1-247-856-00	CARBON	11K	5%	1/4W	
R714	1-249-425-11	CARBON	4.7K	5%	1/4W	
R715	1-249-425-11	CARBON	4.7K	5%	1/4W	
R716	1-249-437-11	CARBON	47K	5%	1/4W	
R717	1-249-429-11	CARBON	10K	5%	1/4W	
R719	1-249-437-11	CARBON	47K	5%	1/4W	
R720	1-249-437-11	CARBON	47K	5%	1/4W	
R722	1-249-421-11	CARBON	2.2K	5%	1/4W	
R801	1-249-422-11	CARBON	2.7K	5%	1/4W	
R802	1-249-424-11	CARBON	3.9K	5%	1/4W	
R803	1-249-422-11	CARBON	2.7K	5%	1/4W	
R804	1-249-424-11	CARBON	3.9K	5%	1/4W	
R805	1-249-428-11	CARBON	8.2K	5%	1/4W	
R806	1-249-434-11	CARBON	27K	5%	1/4W	
R807	1-249-422-11	CARBON	2.7K	5%	1/4W	
R808	1-249-424-11	CARBON	3.9K	5%	1/4W	
R809	1-249-428-11	CARBON	8.2K	5%	1/4W	
R810	1-249-434-11	CARBON	27K	5%	1/4W	
R811	1-249-412-11	CARBON	390	5%	1/4W	

Ref.No.	Part No.	Description			
R812	1-249-413-11	CARBON	470	5%	1/4W
R813	1-249-410-11	CARBON	270	5%	1/4W
R814	1-249-429-11	CARBON	10K	5%	1/4W
R815	1-249-429-11	CARBON	10K	5%	1/4W
R816	1-249-429-11	CARBON	10K	5%	1/4W
R817	1-249-429-11	CARBON	10K	5%	1/4W
R818	1-249-405-11	CARBON	100	5%	1/4W
R819	1-249-429-11	CARBON	10K	5%	1/4W
R820	1-249-405-11	CARBON	100	5%	1/4W
R821	1-249-429-11	CARBON	10K	5%	1/4W
R822	1-247-903-00	CARBON	1M	5%	1/4W
R823	1-249-441-11	CARBON	100K	5%	1/4W
R824	1-249-433-11	CARBON	22K	5%	1/4W
R825	1-249-425-11	CARBON	4.7K	5%	1/4W
R826	1-249-441-11	CARBON	100K	5%	1/4W
R827	1-249-429-11	CARBON	10K	5%	1/4W
R828	1-249-405-11	CARBON	100	5%	1/4W
R829	1-249-429-11	CARBON	10K	5%	1/4W
R830	1-249-405-11	CARBON	100	5%	1/4W
R831	1-249-429-11	CARBON	10K	5%	1/4W
R832	1-249-405-11	CARBON	100	5%	1/4W
R833	1-249-429-11	CARBON	10K	5%	1/4W
R834	1-249-405-11	CARBON	100	5%	1/4W
R835	1-249-429-11	CARBON	10K	5%	1/4W
R836	1-249-405-11	CARBON	100	5%	1/4W
R837	1-249-429-11	CARBON	10K	5%	1/4W
R838	1-249-405-11	CARBON	100	5%	1/4W
R839	1-249-429-11	CARBON	10K	5%	1/4W
R840	1-249-405-11	CARBON	100	5%	1/4W
R841	1-249-429-11	CARBON	10K	5%	1/4W
R842	1-249-405-11	CARBON	100	5%	1/4W
R843	1-249-425-11	CARBON	4.7K	5%	1/4W
R844	1-249-429-11	CARBON	10K	5%	1/4W
R845	1-249-426-11	CARBON	5.6K	5%	1/4W
R846	1-249-426-11	CARBON	5.6K	5%	1/4W
R847	1-249-426-11	CARBON	5.6K	5%	1/4W
R849	1-249-426-11	CARBON	5.6K	5%	1/4W
R850	1-249-426-11	CARBON	5.6K	5%	1/4W
R852	1-249-441-11	CARBON	100K	5%	1/4W
R853	1-249-441-11	CARBON	100K	5%	1/4W
R854	1-249-441-11	CARBON	100K	5%	1/4W
R855	1-249-441-11	CARBON	100K	5%	1/4W
R856	1-249-441-11	CARBON	100K	5%	1/4W
R857	1-249-436-11	CARBON	39K	5%	1/4W
R858	1-247-891-00	CARBON	330K	5%	1/4W
R859	1-249-436-11	CARBON	39K	5%	1/4W
R860	1-247-891-00	CARBON	330K	5%	1/4W
R861	1-249-405-11	CARBON	100	5%	1/4W
R862	1-249-405-11	CARBON	100	5%	1/4W
R863	1-249-405-11	CARBON	100	5%	1/4W
R864	1-249-405-11	CARBON	100	5%	1/4W
R865	1-249-405-11	CARBON	100	5%	1/4W
R866	1-249-405-11	CARBON	100	5%	1/4W
R867	1-249-405-11	CARBON	100	5%	1/4W
R868	1-249-405-11	CARBON	100	5%	1/4W
R869	1-249-405-11	CARBON	100	5%	1/4W
R870	1-249-405-11	CARBON	100	5%	1/4W

Note:
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Replace only with part number specified.

Note:
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Ne les remplacer que par une pièce portant le numéro spécifié.

Ref.No.	Part No.	Description			
R871	1-249-429-11	CARBON	10K	5%	1/4W
R872	1-249-429-11	CARBON	10K	5%	1/4W
R873	1-249-426-11	CARBON	5.6K	5%	1/4W
R874	1-249-426-11	CARBON	5.6K	5%	1/4W
R875	1-249-429-11	CARBON	10K	5%	1/4W
R876	1-249-429-11	CARBON	10K	5%	1/4W
R877	1-249-429-11	CARBON	10K	5%	1/4W
R907	1-216-242-00	METAL GLAZE	68K	5%	1/8W
R908	1-216-246-00	METAL GLAZE	100K	5%	1/8W
R909	1-216-246-00	METAL GLAZE	100K	5%	1/8W
R910	1-216-238-00	METAL GLAZE	47K	5%	1/8W
R911	1-216-182-00	METAL GLAZE	220	5%	1/8W
R912	1-216-182-00	METAL GLAZE	220	5%	1/8W
R913	1-216-150-00	METAL GLAZE	10	5%	1/8W
R914	1-216-150-00	METAL GLAZE	10	5%	1/8W
R915	1-216-150-00	METAL GLAZE	10	5%	1/8W
R951	1-249-413-11	CARBON	470	5%	1/4W
R952	1-249-413-11	CARBON	470	5%	1/4W
R953	1-247-881-00	CARBON	120K	5%	1/4W
R954	1-247-881-00	CARBON	120K	5%	1/4W
R955	1-249-429-11	CARBON	10K	5%	1/4W
R956	1-249-417-11	CARBON	1K	5%	1/4W
R957	1-249-417-11	CARBON	1K	5%	1/4W
R958	1-247-891-00	CARBON	330K	5%	1/4W
R959	1-247-901-11	CARBON	820K	5%	1/4W
R960	1-249-441-11	CARBON	100K	5%	1/4W
R1001	1-249-408-11	CARBON	180	5%	1/4W
R1002	1-249-408-11	CARBON	180	5%	1/4W
R1051	1-249-412-11	CARBON	390	5%	1/4W
RV101	1-224-550-21	RES, ADJ, METAL GLAZE 220(PB LEVEL ADJ)			
RV102	1-224-251-XX	RES, ADJ, METAL GLAZE 4.7K (REC LEVEL ADJ)			
RV103	1-237-459-11	RES, ADJ, CARBON 10K (METER ADJ)			
RV104	1-237-459-11	RES, ADJ, CARBON 10K (CAL METER ADJ)			
RV105	1-237-459-11	RES, ADJ, CARBON 10K (CrO2 BIAS ADJ)			
RV108	1-237-456-11	RES, ADJ, CARBON 1K (OA ADJ)			
RV201	1-224-550-21	RES, ADJ, METAL GLAZE 220(PB LEVEL ADJ)			
RV202	1-224-251-XX	RES, ADJ, METAL GLAZE 4.7K (REC LEVEL ADJ)			
RV203	1-237-459-11	RES, ADJ, CARBON 10K (METER ADJ)			
RV204	1-237-459-11	RES, ADJ, CARBON 10K (CAL METER ADJ)			
RV205	1-237-459-11	RES, ADJ, CARBON 10K (CrO2 BIAS ADJ)			
RV208	1-237-456-11	RES, ADJ, CARBON 1K (OA ADJ)			
RV501	1-230-344-11	RES, VAR, CARBON 20K/20K (REC LEVEL)			
RV502	1-238-840-11	RES, VAR, CARBON 5K/5K (CAL/REC LEVEL)			
RV503	1-238-841-11	RES, VAR, CARBON 20K/20K (PHONE LEVEL)			
RV504	1-238-839-11	RES, VAR, CARBON 5K (BIAS)			
RV507	1-237-873-11	RES, ADJ, CARBON 100 (CAL ADJ)			
RV508	1-237-873-11	RES, ADJ, CARBON 100 (CAL ADJ)			
RV509	1-237-456-11	RES, ADJ, CARBON 1K (NORMAL BIAS ADJ)			
RV510	1-237-459-11	RES, ADJ, CARBON 10K (METEL BIAS ADJ)			
RV801	1-237-457-21	RES, ADJ, CARBON 2K (TORQUE ADJ)			
RY501	1-515-614-11	RELAY			
S001	⚠1-554-920-11	SWITCH, PUSH (AC POWER)(1 KEY)			
S002	⚠1-570-307-11	(E)...SWITCH, VOLTAGE CHANGE			
S501	1-572-163-11	SWITCH, ROTARY (MONITOR)			
S502	1-572-162-11	SWITCH, ROTARY (DOLBY NR)			
S503	1-572-164-11	SWITCH, ROTARY (REC EQ CAL)			

Ref.No.	Part No.	Description
S504	1-572-165-11	SWITCH, PUSH (1 KEY)(HX PRO)
S505	1-554-833-11	SWITCH, PUSH (1 KEY)(CALIBRATION)
S506	1-572-163-11	SWITCH, ROTARY (INPUT)
S801	1-554-303-21	SWITCH, KEY BOARD (RESET)
S802	1-554-303-21	SWITCH, KEY BOARD (MEMORY)
S803	1-554-303-21	SWITCH, KEY BOARD (DISPLAY MODE)
S804	1-554-303-21	SWITCH, KEY BOARD (⏏)
S805	1-554-303-21	SWITCH, KEY BOARD (STOP)
S806	1-554-303-21	SWITCH, KEY BOARD (⏩)
S807	1-554-303-21	SWITCH, KEY BOARD (⏩)
S808	1-554-303-21	SWITCH, KEY BOARD (REC)
S809	1-554-303-21	SWITCH, KEY BOARD (▶)
S810	1-554-303-21	SWITCH, KEY BOARD (PAUSE)
S811	1-554-303-21	SWITCH, KEY BOARD (⏮)
S812	1-554-303-21	SWITCH, KEY BOARD (⏭)
S813	1-554-303-21	SWITCH, KEY BOARD (REC MUTE)
S814	1-571-908-11	SWITCH, SLIDE (TIMER)
S1001	1-466-238-11	ENCODER, ROTARY
S1002	1-570-953-11	SWITCH, PUSH (1 KEY)(DOOR)
S1003	1-571-958-11	SWITCH, PUSH (1 KEY)(CLOSE)
S1004	1-572-126-11	SWITCH, PUSH (1 KEY)(OPEN)
S1005	1-572-125-11	SWITCH, LEAF (FWD)
S1006	1-572-202-11	SWITCH, LEAF (HALF)
S1007	1-572-125-11	SWITCH, LEAF (METAL)
S1008	1-572-125-11	SWITCH, LEAF (70U)
T001	⚠1-449-981-11	(US,Canadian)...TRANSFORMER, POWER
T001	⚠1-449-982-11	(AEP,WG).....TRANSFORMER, POWER
T001	⚠1-449-983-11	(UK).....TRANSFORMER, POWER
T001	⚠1-449-984-11	(E).....TRANSFORMER, POWER
T101	1-433-361-11	TRANSFORMER, BIAS OSCILLATION
T201	1-433-361-11	TRANSFORMER, BIAS OSCILLATION
THP501	⚠1-202-856-00	SOLID 22 1/4W F
TP1	*1-535-115-00	TERMINAL
TP801	*1-564-505-11	PLUG, CONNECTOR 2P
X801	1-577-358-21	VIBRATOR, CERAMIC
X951	1-577-615-11	VIBRATOR, CRYSTAL (4.934MHz)

ACCESSORY & PACKING MATERIAL

1-465-325-11	(UK,E)...REMOTE COMMANDER (RM-J702)
2-181-754-01	(UK,E)...COVER, BATTERY
1-551-734-11	CORD, CONNECTION (RK-74A)
*3-350-465-01	CUSHION
*3-356-964-01	(K333ESG)...INDIVIDUAL CARTON
*3-356-966-01	(K950ES)....INDIVIDUAL CARTON
*3-703-456-01	LABEL, AMS LICENSE
*3-703-710-41	STICKER, SONY SYMBOL (12)
3-751-126-11	(Canadian,AEP,UK,E)...MANUAL, INSTRUCTION
3-751-126-21	(US).....MANUAL, INSTRUCTION
3-751-126-41	(AEP,WG).....MANUAL, INSTRUCTION
3-703-450-01	(US)...INSTRUCTION
3-793-481-13	INSTRUCTION
4-847-802-00	(EXCEPT UK)...SCREW (CASE)

Note:
The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

Note:
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Ne les remplacer que par une pièce portant le numéro spécifié.

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